



2007 Annual Pollution Prevention Report

Reporting Period:

January 1, 2007 – December 31, 2007

Prepared By:

City of San José

Environmental Services

San José/Santa Clara Water Pollution Control Plant
Administered by Environmental Services, City of San José

Tributary Agencies: Cities of San José, Santa Clara and Milpitas •
Cupertino Sanitary District • West Valley Sanitation District –
Including Campbell, Los Gatos, Monte Sereno and Saratoga
• County Sanitation Districts 2-3 • Sunol and Burbank Sanitary
District



THIS PAGE INTENTIONALLY LEFT BLANK

Table of Contents

Executive Summary	ix
Mercury.....	x
Cyanide.....	xi
Emerging Pollutants	xi
Household Hazardous Waste (HHW) Drop-Off Facility EIR Approval	xi
Local Limits Update and Sewer Use Ordinance Changes	xii
Sector Loading Study Final Results	xii
General Pollution Prevention Outreach Efforts	xii
Go Green Initiative.....	xiii
2008 Work Plan Highlights.....	xiii
 Section 1 Introduction	 1
Treatment Plant Overview	1
Service Area Description	1
Pollutant Reduction Strategies and Activities for 2007.....	2
2008 Pollutants of Concern	4
 Section 2 Pollution Prevention Program History	 5
Watershed Approach.....	5
A Regional Perspective	5
 Section 3 Program Evaluation Overview	 11
City of San José Industrial Local Limits Update	11
City of San José Sewer Use Ordinance Changes	13
Sector Loading Study.....	14
Program Evaluation Criteria.....	18
 Section 4 Regional Partnerships & Leadership Initiatives.....	 19
Regional Monitoring Program (RMP)	19
Watershed Management Initiative.....	22
Green Business Certification.....	22
United Nations Urban Environmental Accords.....	23
San Jose's Green Vision.....	24
EPEAT: Green Electronic Purchasing.....	25
Regional Outreach Partnerships.....	25
Other Significant Activities.....	26

Section 5	Copper and Nickel.....	33
	Bay-wide Copper TMDL Efforts	36
	Copper and Nickel Sources	36
	Copper and Nickel Estimated Loadings.....	37
	Copper and Nickel Industrial Loading	39
	Copper and Nickel Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan	42
Section 6	Mercury	49
	Mercury Fate and Transport Study – Final Report	49
	Mercury Sources	49
	Mercury Estimated Loading	50
	Mercury Pollution Prevention Program Efforts.....	51
	Mercury Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan	52
Section 7	Cyanide	65
	Cyanide Sources	65
	Cyanide Estimated Loading	65
	Cyanide Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan	67
Section 8	Fats, Oils, and Grease.....	69
	FOG Sources.....	69
	FOG Estimated Loading	69
	Sanitary Sewer Overflows	70
	Sewer System Management Plan (SSMP)	70
	FOG Program Expansion.....	71
	State and Regional FOG Efforts	72
	Fats, Oils & Grease Prevention Plan – 2007 Evaluation and 2008 Work Plan	73
Section 9	Pesticides.....	79
	Legacy Pesticides.....	79
	Pesticide Estimated Loading	79
	Pesticide Sources	79
	Pesticides Prevention Plan – 2007 Evaluation and 2008 Work Plan.....	81
Section 10	Other Pollutants & Emerging Pollutants.....	89
	Safe Medicine Disposal	89
	Evaluation of Pharmaceuticals in the San Francisco Bay	90
	Watershed Management Initiative.....	90
	Green Fleet Policy.....	91

Citywide Implementation of Biodiesel	91
Presentations on Emerging Contaminants.....	92
Coming Clean Initiative	92
Other Pollutants and Emerging Pollutants Prevention Plan – 2007	
Evaluation and 2008 Work Plan	93
Section 11 General Pollution Prevention Outreach for 2007	97
Pollution Prevention Week.....	97
Youth Education	98
Go Green Initiative	98
Grants.....	99
Section 12 Attachments.....	105

List of Tables

Table 1	2007 Accomplishments and 2008 Plan (see referenced report section for details)	xv
Table 2	Historical Summary of P2 Accomplishments	7
Table 3	Adopted Local Limit	12
Table 4	Summary of Preliminary Sector Pollutant Levels (µg/l) from Sector Loading (2006)	14
Table 5	Preliminary Sector Loading Estimates Compared to Plant Headworks (pounds per day)	15
Table 6	Updated Commercial Copper Concentrations	16
Table 7	2007 Copper Sector Loading Results	16
Table 8	2007 Nickel Sector Loading Results	17
Table 9	2007 Mercury Sector Loading Results	17
Table 10	Summary of Regional Outreach Activities 2007	28
Table 11	Sources of Copper and Nickel in Wastewater	37
Table 12	Copper and Nickel Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan	42
Table 13	Sources of Mercury	50
Table 14	Mercury Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan	52
Table 15	Sources of Cyanide	65
Table 16	Cyanide Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan	67
Table 17	Sources of FOG	69
Table 18	FOG Prevention Plan – 2007 Evaluation and 2008 Work Plan	73
Table 19	Sources of Pesticides	80
Table 20	Pesticide Prevention Plan – 2007 Evaluation and 2008 Work Plan	81
Table 21	Other Pollutants & Emerging Pollutants Prevention Plan – 2007 Evaluation and 2008 Work Plan	93
Table 22	General Pollution Prevention Outreach for 2007	100

List of Figures

Figure 1.	Area Tributary to the San José/Santa Clara Water Pollution Control Plant	2
Figure 2.	Laboratory and San Francisco Bay Water <i>Mytilus edulis</i> EC50 values for Bay Regions	21
Figure 3.	Average Daily Copper and Nickel Loading to the Plant.....	34
Figure 4.	Ambient Monitoring Stations	34
Figure 5.	Dry Weather Dissolved Copper Means (\pm SD) for Indicator Stations	35
Figure 6.	Dry Weather Dissolved Nickel Means (\pm SD) for Indicator Stations	35
Figure 7.	Copper Sector Loading.....	38
Figure 8.	Nickel Sector Loading.....	38
Figure 9.	Average Daily Total Industrial Copper Loading.....	40
Figure 10.	Average Daily Total Industrial Nickel Loading.....	40
Figure 11.	Average Daily Total Industrial Flow	41
Figure 12.	Preliminary Mercury Sector Loading.....	50

List of Attachments

Attachment 1

- South Bay Monitoring Program 2007 Progress Report

Attachment 2

- Mercury Fate and Transport Study Final Report Executive Summary

Attachment 3 – Outreach Material

- CA Wastewater Testing Laboratories List
- Curbside Courier Newsletters, Spring and Fall, 2007
- ESD Connections Newsletter - Spring, Summer, Fall, Winter, 2007
- Get Mercury Wise and Protect the Bay Brochure
- Grease Interceptor and Grease Trap Cleaning Services and Log
- “Green” Brown Bag Flyers - January, February, March, April, and August, 2007
- Guidelines for Efficient Water Use
- Industrial User Academy Workshop, April 2007
- Inside San José, August 2007 Newsletter
- Mobile Food Vendors Environmental Guidelines brochure
- National Pollution Prevention Week Flyers and Display
- Recycle@Work Poster
- Silicon Valley Energy Watch Flyer
- Thermometer Exchange Event Flyers
- Tributary Tribune Industrial Newsletter, Issues I, II, III, 2007
- Watch Out For Mercury Pollution! Poster
- Watershed Awareness - Creeks Come to Class Brochure

Attachment 4 – Plant Influent and Effluent Charts

- Copper influent
- Copper effluent
- Nickel influent
- Nickel effluent
- Mercury influent
- Mercury effluent

Attachment 5 – TMDL, RMP, and SSO Participation Letters

- January 3, 2008 BACWA Letter, RE: Submittal of Annual Reports by BACWA Members on Participation on the RMP, TMDLs, and SSOs
- January 3, 2008 San Francisco Estuary Institute, Participation in the RMP

THIS PAGE INTENTIONALLY LEFT BLANK

Executive Summary

The City of San José operates the San José/Santa Clara Water Pollution Control Plant (Plant) for the tributary agencies of the cities of San José, Santa Clara and Milpitas; Cupertino Sanitary District; West Valley Sanitary District including Campbell, Los Gatos, Monte Sereno and Saratoga; County Sanitation District 2-3; and Sunol and Burbank Sanitary Districts. This 2007 Annual Pollution Prevention Report has been prepared in accordance with the requirements of Order Number R2 2003-0085, NPDES Permit no. CA0037842 issued to the San José/Santa Clara Water Pollution Control Plant on September 17, 2003.



San José has a long and esteemed history of implementing water quality programs, supporting and leading efforts to advance the scientific understanding of water quality issues, and active engagement in local and regional forums to address watershed issues.

First adopted by the San José City Council in 1990, the City's Pollution Prevention program has evolved from small-scale waste minimization efforts to the current watershed-based approach in addressing pollutant issues. Over the years, the City has realized major reduction in various pollutants of concern by implementing strict industrial pollutant control activities, launching technical studies to understand the fate and transport of pollutants in the South Bay and the Plant, developing and practicing strategies to reduce pollutants in the Plant's effluent, and raising awareness of water quality issues and environmental safe practices. These activities included the City developing waste minimization programs for specific industry types in the early 1990's; revision of the local limits for copper, nickel, and cyanide in 1994; initiating a New Development Review Program to ensure certain environmental requirements (flow, pollutant discharge, industrial wastewater reuse, etc.) are incorporated as a condition of development within the City; and developing the Flow Audit Studies Program. In addition, the City continually strives to maximize the use of regional venues, tools, and resources in addressing regional issues while implementing local solutions that effectively contribute to Bay-wide watershed protection. A Summary of Historical P2 Highlights is included in Section 2 of the report.

The pollutants of concern for the Plant are discussed in individual sections of this report:

- copper and nickel (Section 5),
- mercury (Section 6),
- cyanide (Section 7),
- fats, oils, and grease (FOG) (Section 8), and
- pesticides (Section 9).

Each section addresses the source and the estimated load of the pollutant, goals to address the pollutant, effectiveness measures and results of activities through the pollution prevention program for 2007, and outreach messages and activities planned for 2008.

In addition, the City continues to develop and implement programs that address other pollutants, and study the sources and prevention options for some emerging contaminants (Section 10).

Highlights for 2007 pollution prevention activities are summarized below.

Mercury

The City worked collaboratively with regional partners on a public education program offering residents throughout the Bay Area an opportunity to exchange their glass fever thermometers for a digital one free of charge. The primary objective of the Thermometer Exchange events was to educate the public and employees about day to day pollution prevention activities and the secondary objective was to collect and properly dispose of mercury fever thermometers. The City hosted five exchange events in which more than 500 residents and City employees participated. A total of 1,346 mercury thermometers were collected. The City plans to continue hosting thermometer exchanges in 2008.



The City completed the Mercury Fate and Transport Study designed to examine the fate and transport of mercury through the Plant processes. Results show a highly efficient removal rate for total mercury (approximately 99%) correlated with the removal of solids. Methylmercury is removed at a rate of 97%. The final report was submitted to the Water Board in December 2007.

Additional pollution prevention activities funded by solid waste programs included supporting the County household hazardous waste (HHW) residential drop off program that collected 1,170 pounds of elemental mercury, 82,211 pounds of fluorescent lights, and 65,860 pounds of batteries.

Cyanide

In response to elevated influent and effluent cyanide concentrations at the Plant, the City of San José initiated a surveillance monitoring program in December of 2004. Results of the monitoring program found that an industrial user was discharging high concentrations of heavy metals and cyanide. Evidence and data collected from further investigation was referred to the City Attorneys' Office and the Office of the Santa Clara District Attorney for enforcement action. In 2007 a settlement that includes civil penalties, cost recovery, and a mechanism for ensuring future violations do not occur, was placed on the record before the Santa Clara County Superior Court. Final details of the settlement will be included in the 2008 Annual Report.

Emerging Pollutants

Through hosting the Safe Medicine Disposal Days in 2006, the City learned that large pharmaceutical collection events are costly and resource intensive. As a result, the City's focus has shifted from one-day collection events to establishing a more convenient and sustainable alternative for pharmaceutical collection. City staff has participated in discussions of a regional pharmaceutical collection pilot program, anticipated to begin in 2008. Until an ongoing program has been implemented, residents will continue to be directed to the Santa Clara County Household Hazardous Waste (www.hhw.org) program for disposal of unwanted pharmaceuticals.

The City also participates on the California Product Stewardship Council in promoting potential producer responsibility legislation for pharmaceuticals at the state level. The City supported Senate Bill 966 that was signed into legislation by Governor Schwarzenegger in October 2007. This legislation will begin the process of establishing a state-wide solution for disposal of unused and expired prescription pharmaceuticals by creating model programs that allow retailers of pharmaceutical drugs and other organizations to accept and collect these materials for disposal. The California Integrated Waste Management Board will implement grant funding for these model programs. The City will monitor for grant funding and program implementation opportunities.

Household Hazardous Waste (HHW) Drop-Off Facility EIR Approval

The City continues efforts to relocate an HHW drop-off site to a potentially permanent location. On November 15, 2006, the previous San José HHW facility was closed and decommissioned to appropriate space for the San Jose Central Service Yard expansion project. An environmental review of potential new locations was administered, with a full Environmental Impact Report (EIR) developed and publicly circulated from April through May 2007. In June 2007, the San José Planning Commission certified the EIR, with the City Council subsequently accepting and approving the relocation project. The new drop-off facility is scheduled to open as an interim facility at this time in late 2008.

Local Limits Update and Sewer Use Ordinance Changes

In June 2007, the Regional Board approved the City's 2006 Industrial Waste Discharge Local Limits Update report. In December 2007, the City Council approved a revised Sewer Use Ordinance that incorporated the changes to the Local Limits as identified in the report as well as other required changes to the Sewer Use Ordinance. A discussion of the approved local limits and Sewer Use Ordinance changes is included in Section 3 of this report.

Sector Loading Study Final Results

The City completed the Sector Loading Study in late 2007 and results are presented in Section 3 of this report. During 2007, further analysis and evaluation was performed in order to finalize the sector loading estimates. In addition, follow up work was done on one of the commercial sampling sites where higher than anticipated levels of copper were found during the sector loading sampling in 2006. The City investigated upstream dischargers to determine the representative concentration of copper in the wastewater for one of the study's sample locations and performed additional sampling at that location.

General Pollution Prevention Outreach Efforts

In addition to pollutant specific outreach, the City produces general outreach materials and participates in events that promote fundamental water quality management and pollution prevention messages that address more than one specific pollutant. The following are highlights of the City's general outreach efforts in 2007:

Three issues of the Tributary Tribune newsletter were produced and distributed to all industrial users (IUs) in the Plant's service area. The annual Industrial Users Academy workshop was attended by 27 participants from 17 companies. A tour of the Plant was reincorporated into the IU Academy this year.



In September, the City actively participated in National Pollution Prevention Week. The week-long celebration included a display in the lobby of City Hall, a Resource Fair in the City Hall Rotunda with over 16 City environmental programs and initiatives providing information and tools to attendees on how to prevent pollution in their daily lives, a biologist led walk along the Guadalupe River where attendees learned about the affects of urban activities upon the riparian corridor, and a presentation on global warming. In addition, the City Council adopted a proclamation declaring Pollution Prevention Week in San José.



Go Green Initiative

In November 2007, San José co-hosted the Go Green Initiative's third annual Earth Summit, and was named the first "International Go Green City of the Year" at the event. Approximately 300 educators from across the nation came and learned methods of incorporating green concepts into the classroom. 95 of the participants included San José parents, teachers, students and principals. The Go Green Initiative is the nation's fastest growing fully comprehensive environmental action plan for schools. It promotes environmental stewardship on campuses from elementary schools through universities.

The City is involved in several regional efforts:

- As a founding member of the WMI and in partnership with the Santa Clara Valley Urban Runoff Pollution Prevention program, the City participated in the Watershed Watch Campaign designed to deliver watershed protection and pollution prevention messages.
- As part of active participation in BACWA and the Bay Area Stormwater Management Agencies Association (BASMAA), San José participated in residential and commercial outreach to minimize chemical usage and educate the target audience about proper disposal practices of chemicals and fats, oil, and grease.
- The City also actively participates in the Bay Area Pollution Prevention Group (BAPPG) to deliver pollution prevention messages to residents and businesses.

Youth education was also an integral part of the City's program this year. The City's youth watershed education team develops and delivers watershed and pollution prevention messages to youth and youth educators through grants, curricula aligned to state standards, teacher workshops, and partnerships with other agencies and organizations.

2008 Work Plan Highlights

Future activities will include further development of the City's Dental Amalgam Program, enhancement to the City's comprehensive Fats, Oils, and Grease (FOG) program, further research, collaboration, and implementation of a pilot collection program for pharmaceuticals, and continued collaboration with other agencies to promote legislation supporting Product Stewardship models to address pharmaceutical disposal and other pollutants of concern.

Table 1 presents the P2 highlights for 2007 and plans for 2008.

THIS PAGE WAS INTENTIONALLY LEFT BLANK

Table 1 2007 Accomplishments and 2008 Plan (see referenced report section for details)			
Pollutant	2007 Accomplishments	2008 Plan	Evaluation Criteria
Copper & Nickel Section 5	<ul style="list-style-type: none"> Completed 1 flow reduction project through the Water Efficiency Technology (WET) program resulting in a 5,533 gpd reduction in wastewater discharge to the Plant, positively impacting loading levels. \$4,483 in rebates awarded. Completed Guidelines for Efficient Water Use booklet. Monitored Plant influent, effluent, and Lower South Bay to ensure that treatment processes were working and industrial discharges and ambient Cu and Ni levels were not significantly increasing. Surveillance program for nickel initiated due to influent loading event. No corresponding changes to the effluent nickel loading have been identified. Presentations on the WET Program were given at the April IU Academy. 27 participants from 17 different companies attended. 	<ul style="list-style-type: none"> Conduct a presentation to UA Local 393 and Green Plumber Workshop on copper corrosion control practices through BAPPG. Continue monitoring copper and/or nickel at indicator stations. Update, reprint, and distribute copper fact sheet developed by BAPPG at San José permit center. Present WET program information at IU Academy scheduled for April 2008. Publish a WET success story in the summer 2008 Tributary Tribune. Complete at least one flow reduction project through the WET program in 2008. Distribute “Guidelines for Industrial Wastewater Reuse” and “Guidelines for Efficient Water Use” as appropriate. Complete Nickel surveillance program and summarize results in 2008 Annual Report. 	<ul style="list-style-type: none"> Survey attendees at end of workshop. Target: Greater than 80% indicating an improvement in awareness of installation and design practices. Copper and Nickel levels in Bay waters. Track numbers of fact sheets distributed at permit center in San José and expand to centers throughout Tributary Area. Percentage of IUs aware of WET program. Track number of inquiries from IUs regarding WET Program. Number of projects completed. Total flow reduction for each project and amount of rebate awarded. Number of brochures distributed and downloaded from City website. Measure influent loading of Nickel levels.
Mercury Section 6	<ul style="list-style-type: none"> Compiled and analyzed results of survey sent to 1,280 dentists in 2006 to determine percent currently using amalgam separators and following at least some BMPs. Results indicate that 78% of dentists follow the ADA BMPs for dental amalgam. The San José Planning Commission and City Council certified and accepted the EIR and relocation project for a new potentially permanent HHW facility in San José. Supported and promoted the HHW program in San José for the disposal of mercury thermometers, fluorescent bulbs and other household sources of mercury. The Countywide HHW program recycled: <ul style="list-style-type: none"> 1,170 pounds of elemental mercury 82,211 pounds of fluorescent lights 65,860 pounds of household batteries Held five Thermometer Exchange events in the tributary area during 2007. <ul style="list-style-type: none"> More than 500 tributary residents and City employees attended Exchanged 1,346 thermometers. Distributed information on proper disposal of mercury containing products at all events. Established a Citywide program to purchase low mercury fluorescent lamps and recycled fluorescent lamps when replaced. The City recycled approximately 61,000 feet of mercury-containing fluorescent lamps in FY 06-07. The citywide employee battery collection program collected and properly recycled 5,958 pounds of alkali and rechargeable batteries. 	<ul style="list-style-type: none"> Continue implementation of dental amalgam program. Continued support of the County HHW program. City anticipates opening new HHW facility in late 2008. Continue working with PG&E and City energy programs to encourage proper universal waste disposal through classes for small businesses. Conduct a minimum of three thermometer exchange events in 2008. Evaluate feasibility of permanent exchange locations. Continue to replace lamps with low mercury fluorescents as needed in all City facilities. Continue to maintain battery collection locations for employees Actively support regional efforts to address mercury including exploring universal waste legislation opportunities to require extended producer responsibility through participation in the California Product Stewardship Council. 	<ul style="list-style-type: none"> Track number of stakeholder meetings and attendees City Council adoption of dental amalgam program ordinance Number of tributary area residents dropping off devices at one-day events and at the Sunnyvale and San Martin facilities. Amount of materials collected from tributary area residents. Number of classes held and participants attending. Track number of participants in events and number of thermometers collected. Track number of feet of mercury-containing fluorescent lamps purchased and recycled. Track amount of batteries collected. Monitor progress toward legislation.
Cyanide Section 7	<ul style="list-style-type: none"> Results of the cyanide surveillance monitoring program found that an Industrial User was discharging high concentrations of heavy metals, and cyanide. On September 14, 2007, a settlement was placed on the record before the Santa Clara County Superior Court. Analyzed influent/effluent for Cn to monitor for elevated levels entering the Plant. 	<ul style="list-style-type: none"> Provide education on cyanide issues associated with wastewater through fact sheets distributed to targeted facilities during inspections. Continue surveillance and monitoring of industrial discharges. 	<ul style="list-style-type: none"> Decrease influent levels of cyanide to the Plant and coming from IUs. Decrease influent levels of cyanide to the Plant and coming from IUs.
FOG Section 8	<ul style="list-style-type: none"> Inspected 1,862 restaurants. 49% of facilities had one or more Area of Concern (AOC), a decrease of 8% from FY 05-06. Investigated 34 grease related complaints, involving 44 facilities. 	<ul style="list-style-type: none"> Continue to expand the FOG inspection program to improve control programs as required in SSMP requirement. This will include ordinance revisions to support inspection program improvements. 	<ul style="list-style-type: none"> % decrease in the number of facilities with recorded Areas of Concern. % decrease in reported blockages attributed to FOG.

Table 1 2007 Accomplishments and 2008 Plan (see referenced report section for details)			
Pollutant	2007 Accomplishments	2008 Plan	Evaluation Criteria
	<ul style="list-style-type: none"> Performed 209 plan checks of food service facilities. Distributed 7,336 outreach pieces to restaurants with message of reducing FOG entering sanitary sewer. Delivered pollution prevention messages to Hispanic audiences in the 9-county San Francisco Bay Area through Regional Media Relations Committee. In FY 06-07, paid radio placements reached over 200,000 Hispanic listeners daily over a 4-week period, and generated more than 2 million impressions. The City began evaluating the addition of a FOG receiving station at the Plant. 	<ul style="list-style-type: none"> Inspect and educate owners and operators of local restaurants and food service facilities on best management practices for grease management. Consider expanding the FOG inspection program to other tributary areas. Work with South Bay dischargers or regionally to develop a grease hauler certification program Conduct Spanish radio station interview in early 2008. Message to be proper disposal of residential FOG. Complete development of an SSMP Communications Plan. Continue evaluation of a FOG receiving station at the Plant as part of the Digester Rehabilitation Project. Continue as opportunity arises to deliver messages through the Regional Media Relations committee (RMR), direct mailers, and door hangers. 	<ul style="list-style-type: none"> Reduced tonnage of FOG removed at Plant primary treatment. Inspect 1,300 food service facilities and distribute BMPs as part of inspection. Number of inspections completed in other tributary areas. Monitor progress. Number of Bay Area Spanish speakers reached. Monitor development of plan. Award of consulting contract for design of the Digester Rehabilitation Project. Number of placements, interviews, articles, etc., through RMR. Number of impressions, radio paid placements, and PSAs.
Pesticides Section 9	<ul style="list-style-type: none"> IPM pilot projects implemented in FY 06-07 using biological controls such as goats, bats, and owls to reduce pesticide use. 124 City employees that apply pesticides received training on following IPM techniques. All new City facility maintenance contracts included language on IPM techniques and City policies regarding pesticide application. The Santa Clara County HHW Program collected 1,250 lbs of dursban and diazinon. Over 212,150 lbs of other poisons were managed as well. Participated in the Our Water Our World campaign and the Watershed Watch campaign, both of which deliver IPM messages to residents and area businesses. In FY 06-07, Watershed Watch campaign placed a total of 210 print ads, 1530 radio ads, 75 VTA Bus Tail Posters, and provided donated media on Paramount's Great America electronic billboard. The "Watch Out" Campaign was implemented in FY 06-07. The campaign was very successful in reaching a wide audience with frequency and regularity. 	<ul style="list-style-type: none"> Hold annual training for all City employees that apply pesticides. Continue to support the implementation of an Annual Regional IPM Conference or regional workshops. Include language in contracts that IPM techniques and City policies regarding pesticide application will be followed. In partnership with SCVURPPP assist in implementing the first Santa Clara Valley Green Gardener training course from Feb-April 2008. Participate in the Our Water Our World and Watershed Watch campaigns. Advertise HHW availability for disposal of waste pesticides. 	<ul style="list-style-type: none"> 100% of applicable employees receiving annual training. Number of attendees. Number organizations represented by attendees and speakers. 100% of contracts including language. Number of participants. Number of events attended. Number of households using HHW facility for drop-off of pesticides. Amount of pesticides collected.
Emerging Pollutants	<ul style="list-style-type: none"> A medicine take back event was part of a Pollution Prevention Week Employee Resource Fair held on September 18, 2007. 59 pounds of expired and unused medicines were collected and properly disposed. Staff continued to provide ongoing residential outreach to promote the HHW program benefits and to provide updates on the planning and construction of the new drop-off facility in San José. Staff presented at San José State University, local nonprofit organizations, the MLK Library, the Go Green Schools conference, and County of Santa Clara's Green Business Conference on the potential risks of emerging contaminants in personal care products, cleaning products and pharmaceuticals once they enter water bodies like the Bay. Over 300 participants reached. City staff presented on the subject of Green Janitorial Products at the Santa Clara County Green Business workshop held in March 2007. 	<ul style="list-style-type: none"> Provide one-day drop-off event(s) for residential pharmaceutical waste. Continue exploring partnership and grant opportunities to fund a pilot pharmaceutical take back program. Complete RMP Technical Report on pharmaceuticals in the SF Bay in cooperation with City of Palo Alto, the San Francisco Estuary Institute and Axy's Analytical Laboratories. Work with Coming Clean Campaign partners to develop a Triclosan fact sheet. Actively support regional efforts to address universal waste legislation opportunities to require extended producer responsibility through participation in the California Product Stewardship Council. 	<ul style="list-style-type: none"> Number of residents attending event. Amount of pharmaceuticals collected. Track pounds of medications collected. Publish paper in peer reviewed scientific journal. Increased awareness of effects of personal care products by Progress toward legislation.

This 2007 Annual Pollution Prevention Report has been prepared in accordance with the requirements of Order Number R2 2003-0085, NPDES Permit no. CA0037842 issued to the San José/Santa Clara Water Pollution Control Plant (Plant) on September 17, 2003.

The City of San José (City) is required to submit to the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board) an annual report by February 28th of each year to document ongoing accomplishments of its Pollution Prevention Program. This report covers the period from January 1, 2007 to December 31, 2007.

Treatment Plant Overview

As lead agency of a joint powers authority, the City operates the Plant, located at 700 Los Esteros Road, in San José, California. The Plant provides advanced treatment of wastewater from domestic, commercial, and industrial sources. The treatment process consists of screening and grit removal, primary sedimentation, secondary (biological nutrient removal) treatment, secondary clarification, filtration, disinfection, and dechlorination. The Plant's final discharge point is Artesian Slough, a tributary to Coyote Creek, which flows to the South San Francisco Bay.

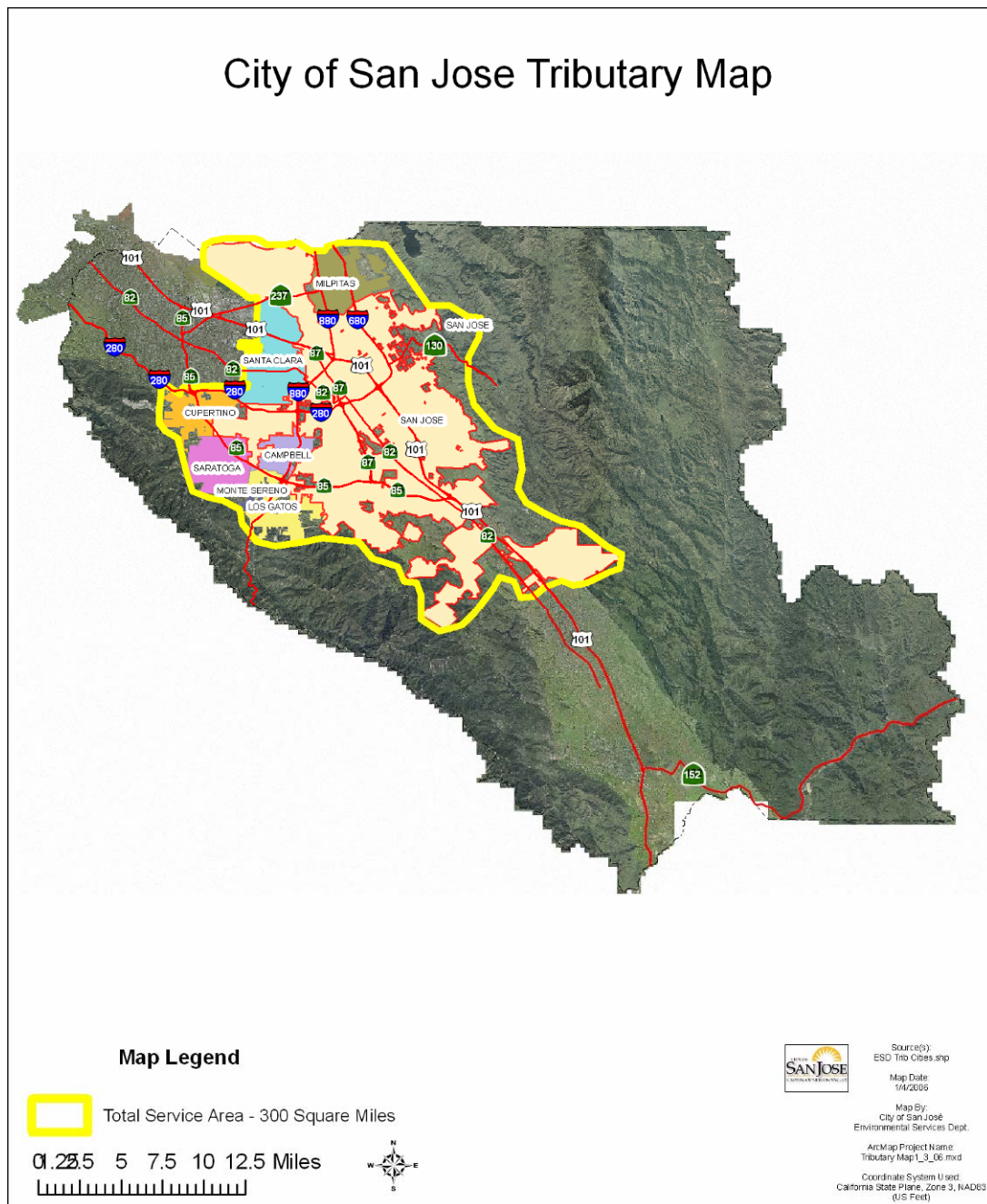
The Plant has an average dry weather flow design capacity of 167 million gallons per day (MGD), and a 271 MGD peak hourly flow capacity. In 2007, the Plant's Annual Average Influent Flow was 112.8 MGD. The Plant's permit includes a requirement for maintaining Average Dry Weather Effluent Flow (ADWEF) below 120 MGD or to levels that do not negatively affect salt marsh habitat. For 2007, the ADWEF was 95.0 MGD and therefore remained well below the dry-weather flow trigger for the ninth consecutive year. Flow reduction activities are reported annually in the South Bay Action Plan Report.

Service Area Description

As seen in Figure 1, the Plant's service area includes a 300-square mile area encompassing the Cities of San José, Santa Clara, and Milpitas; County Sanitation District 2-3; West Valley Sanitation District that includes Campbell, Los Gatos, Monte Sereno and Saratoga; and the Cupertino, Burbank, and Sunol Sanitary Districts (hereinafter called Tributary Agencies).

The current service population is comprised of approximately 1.35 million residents and more than 16,000 commercial and industrial facilities of which about 350 are permitted industrial users. Of the total wastewater flow to the Plant, 60 percent is estimated to come from the residential sector, 6 percent from the industrial sector, and 34 percent from the commercial business sector. Today, the largest daily sources of pollution and flow are the everyday activities of residents and unregulated businesses.

Figure 1. Area Tributary to the San José/Santa Clara Water Pollution Control Plant



Pollutant Reduction Strategies and Activities for 2007

The scope and type of pollution prevention activities in the City have changed over the last two decades based on the successful implementation of source control measures and pollution prevention partnerships with local industry, changes in the type of permitted industrial base, changes in pollutant priorities and sources,

changes in behavior, and availability of resources. Strategies for pollution reduction now focus on behavioral changes to broader audiences and include increased public outreach to the residential sector and commercial sector such as restaurants, dental practices, and hospitals. These target audiences will differ depending on the pollutant of concern.

The City prepares an annual pollution prevention work plan that describes how pollution prevention outreach activities will be implemented in response to the pollutants of concern and any program issues. The work plan details program activity and operational challenges and identifies programmatic and outreach goals and objectives, and strategies to reach those goals.

Implementing effective pollution prevention programs for 1.35 million residents and 16,000 businesses on multiple subjects can be very costly. Partnerships and collaborations enable the City to increase the effectiveness and frequency of message delivery, while managing costs. The City conducts local outreach for issues, pollutants, and audiences specific to the City's service area when it is appropriate to do so.

In executing the Pollution Prevention Program, the City endeavors to:

- employ a watershed approach in addressing pollutant issues;
- maximize the use of regional venues, tools, and resources to address regional issues;
- participate in technical studies that meaningfully contribute to the understanding of pollutant impacts and control strategies; and
- implement local solutions that represent a reasonable investment of resources and effectively contribute to Bay-wide watershed protection.

In 2007, the City developed and implemented the following activities to achieve maximum pollutant reduction:

- Integrated wastewater pollution prevention messages into broader environmental initiatives;
- Developed and distributed sector-targeted outreach material;
- Collaborated on regional P2 efforts;
- Began development of a multi-year P2 work plan to facilitate program planning and development;
- Monitored the Plant's effluent;
- Completed a study on mercury fate and transport;
- Participated in stakeholder P2 studies and sampling efforts; and,
- Organized appropriate training sessions for City employees;

The City's outreach activities for 2007 are presented in Sections 5 through 11 by both targeted pollutants of concern (POC) and general pollution prevention (P2) messages. Activities are reported for the calendar year 2007, when possible. However, when implementation takes place on a fiscal year basis, such as under a contract, or a regional work plan that operates on a fiscal year basis, the activity reported is from the last complete fiscal year of implementation. Copies of new or

revised outreach pieces created and distributed in 2007 are included as Attachment 3.

2008 Pollutants of Concern

In order to most effectively direct City resources in addressing pollutants of concern, the City has instituted a process for identifying and prioritizing pollutants. For the sole purpose of developing the City's specific pollution prevention plans and programs, pollutants for concern are identified if they meet one of the following criteria:

- required by the Plant's NPDES Permit
- federal regulatory requirement
- water quality exceedance
- TMDL driven
- growing public concern
- impact on collection system
- impact on recycled water quality

Prioritization of pollutants of concern help steer City programs to particular pollutants and supports long-term pollution prevention program effectiveness by allowing the City to adapt its approach based on the best available information and resources. 2008 Pollutants of Concern are:

Pollutant	Priority
Mercury	Active program development and implementation
Fats, Oils, and Grease	Active program development and implementation
Copper/Nickel	Continue program efforts already established
Cyanide	Continue program efforts already established
Pesticides	Continue program efforts already established
Other Emerging Contaminants (Pharmaceuticals, etc)	Research, education, and pilot programs

Pollution Prevention (P2), formerly known as waste minimization, has been an element of the City's Source Control Program for more than 15 years. P2 formally began in 1989 when the Regional Water Board ordered the Plant to reduce its copper and nickel discharges by more than 50% to protect aquatic organisms in the South Bay and to meet water quality objectives. It immediately became clear that employing traditional "end of pipe" industrial and commercial controls would not be enough to meet the new discharge requirements. A modified approach to pollution prevention was quickly adopted, which incorporated the following elements:

- Implementation of pollutant-specific and flow reduction programs
- Development of a comprehensive P2 outreach and education campaign
- Adoption of new policies and strategies to support P2 efforts
- A new focus on a watershed/regional approach to P2
- Collection of scientific data in conjunction with special P2 studies
- Formation of regional stakeholder processes and work groups to develop long term solutions to P2 issues

Watershed Approach

Focused P2 pilot efforts started in 1990 to reduce pollutants of concern such as copper, nickel, cyanide, zinc, and lead. The pilot work led to the City's first Clean Bay Strategy, a holistic watershed approach to reduce flow and pollutant loading to the Plant and South Bay first submitted in 1994.

This early strategy was based on the premise that many factors can influence water quality in the South Bay, including Plant influent and effluent flows and concentrations, pollutant source control efforts, stormwater sources of pollution, water supply issues, and in-Plant metals removal efficiencies that affect effluent concentrations. The Clean Bay Strategy was designed to assess the entire system that affects water quality, and direct resources to the most significant issues in that system. This approach allows for more cost-effective P2, and avoided unfair and unrealistic burdens on any one sector of the community.

Then, in 1996, the San José City Council adopted a Water Policy Framework that detailed the commitment of the City to the concept of sustainability in its management of environmental issues. Pollution Prevention is one of seven key elements highlighted in the basic water policy document. This commitment to pollution prevention continues to be mirrored in the Clean Bay Strategy.

A Regional Perspective

Many of the current pollutants of concern must be addressed from a watershed or regional perspective in order to effectively improve water quality. The City continues to commit significant staff time and resources to participating in region-

wide stakeholder processes focused on finding long-term solutions to bay-wide watershed issues. This is accomplished through active participation in the Bay Area Clean Water Agencies (BACWA), the Bay Area Pollution Prevention Group (BAPPG), the Regional Monitoring Program (RMP), the Santa Clara Basin Watershed Management Initiative (WMI), the Water Resources Protection Collaborative, the South Bay Salt Pond Restoration Program and regional workgroups such as the Urban Pesticide Committee, and the California Product Stewardship Council.

Special studies are also an integral part of today's P2 program. The first step in controlling a pollutant source is to understand the system. The City became a Bay Area leader by performing technical studies such as the copper and nickel TMDL support studies in the South Bay that helped dischargers and regulators understand the fate of pollutants and resolve scientific uncertainties.

Many of the resulting research documents and publications can be found on the City's website at www.sanjoseca.gov/esd/pub_res.asp. The City continues to be committed to performing research and sharing its results to ensure that policy development, regulations, and the level of effort to control a pollutant source is based on best available, site-specific information whenever possible.

And, finally, outreach and education remain a strong component of the City's P2 efforts today. The City commits substantial resources each year to develop and disseminate targeted P2 messages and trainings to the industrial, commercial, and residential sectors, as well as to its employees.

Table 2 lists the historical summary of the City's P2 accomplishments from 1983 to the present.

Table 2 Historical Summary of P2 Accomplishments	
Year	Actions
1983	Received formal approval of the City of San José Industrial Pretreatment Program from the Environmental Protection Agency (EPA).
1989	Initiated waste minimization efforts to control 3 pollutants of concern: copper, zinc, and lead. Completed Pollutant Source Evaluation. Completed Waste Minimization Study.
1990	Adopted City Council Resolution No. 62501 in support of a Waste Minimization Program. Implemented Pilot Waste Minimization Program targeting specific metals of concern: copper, nickel, lead, and zinc. Implemented improvements to Pretreatment Program (flow monitoring requirements; increased sampling, inspection, and enforcement activities). Developed waste minimization programs for targeted non-permitted industries that contribute significant metals loading in their waste streams. Radiator repair shops, auto and parts cleaning shops, and photo processors were added to group of permitted industries and required to take part in the pilot waste minimization program. Implemented public education program aimed at residential, commercial, and industrial sectors.
1991	Implemented a waste minimization program for radiator shops, automotive shops, and photo processors. Completed Waste Minimization Implementation Program Report. Implemented a waste minimization program for all permitted industrial dischargers.
1992	Initiated local controls and participated in regional activity targeting the control of copper-based root control chemicals and tributyl tin. Completed commercial and residential sampling program to identify pollutant contribution from these sources.
1993	Initiated Mass Audit Studies Program. Required effluent flow monitoring and completed Flow Verification for all permitted Industrial Users. Developed Reasonable Control Measures Plan.
1994	Developed San José Pollution Prevention Strategy for a Clean Bay. Completed Mass Audit Studies and a Summary Report. Revised the local limits for copper, nickel, and cyanide.
1995	Began Nickel Initiative Partnership Program. Restructured Source Control Program. Three teams - regulations, outreach, and detection – were formed to increase efficiency. Joined the San Francisco Bay Area Pollution Prevention Group (BAPPG). Formed an internal youth education collaboration to promote wastewater and stormwater pollution prevention and water conservation. Began trunkline and upstream monitoring program to identify pollutant sources to the Plant.
1996	Became a signatory to the Santa Clara Basin Watershed Management Initiative (WMI), actively participated in the WMI Core Group, Water Resources Protection Collaborative, Santa Clara Valley Water Urban Runoff Pollution Prevention Program (SCVWURPPP), and subgroups of the WMI. Held a “Heavy Metals Workshop” to discuss issues specific to metals and permitted industrial dischargers. Started the Industrial User Academy to educate representatives from permitted Industrial Users about the pretreatment program and their permit requirements. Developed, printed and distributed BMPs for educational institutions, hospitals, printers, and plumbers. City Council approved the Water Policy Framework.

Table 2 Historical Summary of P2 Accomplishments	
Year	Actions
	<p>Completed the Direct Metalization Study and report for printed circuit board industries.</p> <p>Joined the BASMAA/BACWA Regional Media Relations committee.</p> <p>Started Industry Focus Group to work with industry on developing environmental issues.</p>
1997	<p>Initiated Phase I of the Flow Audit Studies Program.</p> <p>Developed the Flow Audit Study Protocol, a technical guidance document to assist industrial users with performing the flow audit studies.</p> <p>Approximately 40 high flow companies (over 100,000 gpd) were required to conduct flow audit studies and to identify potential flow/pollutant reduction projects for their facilities.</p> <p>Developed, printed, and distributed BMPs for machine shops.</p> <p>Initiated and managed annual Hispanic radio ad campaign through BAPPG.</p> <p>Completed Nickel Initiative Partnership Program.</p> <p>Began Printed Circuit Board Partnership Program to focus on copper and flow reduction.</p> <p>Began annual tracking of permitted industrial influent loading of copper, nickel, and flow.</p> <p>Began ambient monitoring program in the South Bay.</p>
1998	<p>Funded a \$3.5 million contract for a stakeholder effort to develop technical studies in support of the South Bay Copper and Nickel Site-Specific Objective. Studies found that the South Bay was unlikely to be impaired for copper and nickel.</p> <p>Initiated New Development Review Program to ensure certain environmental requirements (flow, pollutant discharge, industrial wastewater reuse, etc.) are incorporated as a condition of development within the City.</p> <p>Launched the quarterly Tributary Tribune newsletter, serving the permitted industrial user community.</p> <p>South Bay Water Recycling Phase I facilities begin distributing recycled water to Santa Clara, Milpitas, and San José.</p> <p>Initiated and funded a grant for educational programs at the Alviso Education Center about wastewater, stormwater, and water conservation for teachers, students, and the public.</p> <p>In support of the Bay-wide mercury TMDL development, continued low-level, ultra clean mercury effluent monitoring.</p> <p>Began the multi-year <i>Special Study for Certain Organic Pollutants</i> using ultra-clean techniques at ultra-low levels at the request of the Regional Water Board to investigate the accuracy of this type of testing.</p> <p>Began the Watershed Grant Program that provided funding to foster and implement innovative solutions to watershed problems.</p>
1999	<p>Completed Phase 1 Flow Audit Studies.</p> <p>Completed Headworks Loading Analysis Study.</p> <p>Completed Printed Circuit Board partnership.</p> <p>Participated in development of award winning "When Ants Invade" regional ad campaign.</p> <p>Developed the award winning Wastewater Paths poster.</p> <p>Completed baseline survey of Industrial Users.</p> <p>Completed cyanide fact sheet.</p> <p>Performed initial hospital and dental office monitoring.</p> <p>Began multi-year bioassessment and biocriteria studies in the South Bay to investigate additional tools and measurements to characterize South Bay water and sediment quality in the lower South Bay.</p> <p>Held Industrial Water Efficiency and Reuse Workshop.</p>
2000	<p>Completed Final Report for Phase 1 Flow Audit Studies Program. Over 50 cost-effective projects were identified.</p> <p>Copper and Nickel Action Plans incorporated into South Bay dischargers' NPDES Permits in lieu of TMDLs.</p> <p>Led BAPPG project to develop a Restaurant Grease Fact Sheet.</p>

Table 2 Historical Summary of P2 Accomplishments	
Year	Actions
2001	<p>Initiated Phase 2 of the Flow Audit Studies Program.</p> <p>10 additional companies with flows over 100,000 gpd were required to conduct flow audit studies and identify potential flow/pollutant reduction projects for their facilities.</p> <p>Revised Flow Audit Study Protocol.</p> <p>Launched Watershed Watch campaign in conjunction with the WMI and SCVURPPP programs.</p> <p>Released the Watershed Management Initiative Characteristics Report.</p>
2002	<p>Completed Cooling Tower Guidelines and conducted workshop for permitted industrial users.</p> <p>Published the first "Success Stories", a periodic publication to highlight local companies that have successfully completed flow or pollutant reduction projects via the Water Efficient Technologies Program.</p> <p>Initiated Food Service Inspection Program which addressed stormwater management practices including the control of fats, oils, and grease.</p> <p>Held Water Efficient Technologies Workshop for wastewater treatment vendors.</p>
2003	<p>Obtained approval of a Revised Policy for Pollution Prevention from the City Council that included City's commitment to apply Integrated Pest Management (IPM) in its approach to pest control and to require the same of contracted pest control operators.</p> <p>Developed standard operating procedures (SOPs) and best management practices (BMPs) for City operations.</p> <p>Instituted IPM policy training for City employees and its contractors.</p> <p>Implemented Phase 1 of the Food Service Inspection Program.</p> <p>Bioassessment study completed.</p> <p>Published the Watershed Management Initiative <i>Information Sheet on Endocrine Disrupting Compounds and Potential Impact on Water Use in the Santa Clara Valley Watershed</i>. This report was distributed widely and used by the US EPA as a handout at a national conference.</p>
2004	<p>Determined Cyanide Attenuation Factor for South Bay.</p> <p>Initiated Mercury Fate and Transport Study at the Plant</p> <p>The City's Environmental Services Department certified as "Green Business".</p> <p>Began series of Brown Bag training sessions on "Green" issues for ESD employees.</p>
2005	<p>Completed new set of BMPs for restaurants.</p> <p>Completed cyanide investigation of permitted industries.</p> <p>Continued Phase I of the Mercury Fate and Transport Study at the Plant</p> <p>Three area hospitals given awards from Mercury Elimination Leadership Program for removal of mercury sources.</p> <p>Began coordinating among City Departments of Transportation, Environmental Services and Public Works to complete Sewer System Management Plan.</p>
2006	<p>Began development of a dental mercury reduction program.</p> <p>Completed Phase I of the Mercury Fate and Transport Study at the Plant</p> <p>Sponsored an HHW drop off station.</p> <p>Completed cyanide surveillance monitoring of identified permitted users of cyanide.</p> <p>Co-hosted the Third Annual Regional IPM Conference.</p> <p>Hosted Safe Medicine Disposal Days event.</p> <p>Completed sample collection for the Sector Loading Study.</p> <p>Implemented Residential outreach on emerging contaminants.</p>
2007	See Table 1 for 2007 Program Accomplishments

THIS PAGE WAS INTENTIONALLY LEFT BLANK

The City strives to create and implement an effective pollution prevention program. Quantifying program effectiveness is challenging, as it involves more than just measuring influent and effluent pollutant concentrations. Effectiveness measures can range from direct measurement of pollutant reduction (as with industrial copper and nickel) to focused surveys to determine if behaviors are being affected through outreach efforts. Additionally, many of the P2 efforts in which the City participates today are focused on achieving long-term and regional solutions to P2 issues.

The City evaluates its Pollution Prevention Program based on:

- Periodic local limits and pollutant loading reviews
- Program evaluation criteria
- Regional commitment and leadership (Section 4)

In accordance with the City's goals of ongoing evaluation and identification of pollutants of concern, developing appropriate effectiveness measure for planned P2 activities, and measuring overall program effectiveness, in 2007 the City finalized the 2006 Industrial Local Limits Update and Sector Loading Study. Descriptions and final results of the Local Limits Update and Sector Loading Study and the resulting Sewer Use Ordinance changes are detailed below.

City of San José Industrial Local Limits Update

In 2006, using the 2004 USEPA Local Limits Development Guidance Manual, the City evaluated the adequacy of current local limits and recommended appropriate changes to the sewer use ordinance where needed. The local limits review evaluated all the current interfering substances identified under the local ordinance. These substances included:

- | | | | | |
|-------------|------------|-------------|------------|----------|
| ▪ Antimony | ▪ Chromium | ▪ Manganese | ▪ Phenol | ▪ Xylene |
| ▪ Arsenic | ▪ Copper | ▪ Mercury | ▪ Selenium | ▪ Zinc |
| ▪ Beryllium | ▪ Cyanide | ▪ Nickel | ▪ Silver | ▪ Total |
| ▪ Cadmium | ▪ Lead | | | Toxic |
| | | | | Organics |
| | | | | (TTO) |

The update also provided an opportunity to review and simplify the local limits for copper and nickel while continuing to ensure that wastewater effluent limits are routinely met and beneficial uses in the South Bay are adequately protected.

With implementation of any revised local limits, the following conditions must be met:

- Effluent must adhere to the 2003 San José/Santa Clara Water Pollution Control Plant National Pollutant Discharge Elimination System (NPDES) Operating Permit discharge requirements,
- Biosolids must meet Federal Sewage Biosolids Standards (1995),
- Influent pollutant concentrations cannot inhibit any treatment plant processes,
- Influent must meet California State Hazardous Waste Threshold Values (2004).

The local limits review recommended simplifying the local limits for copper and nickel from a three-tiered approach to a maximum allowable concentration limit based on a company's discharge volume. The review also determined that the local limits for xylene, TTO, and manganese be eliminated. The selenium limit of 2.0 mg/L was lowered to 1.0 mg/L as a maximum allowable concentration limit. All other local limits were deemed adequate and were not modified. No other pollutants of concern were found based on the 2004 USEPA Local Limits Guidance Manual criteria.

Table 3 summarizes the modifications to the City's local limits resulting from this evaluation.

Table 3 Adopted Local Limit		
Constituent	Existing Local Limits (mg/l)	Modification
Antimony	5.0	No modification at this time
Arsenic	1.0	No modification at this time
Beryllium	0.75	No modification at this time
Cadmium	0.7	No modification at this time
Chromium, Total	1.0	No modification at this time
Copper	Group 1 2.7 maximum allowable and individual limits Group 2 either 1.0 daily maximum or 2.7 maximum allowable and 0.4 annual average Group 3 2.7 maximum allowable	<ul style="list-style-type: none"> • For discharges of 1,000 gpd or more, consolidate to one maximum allowable concentration limit of 2.3 mg/L • For discharges less than 1,000 gpd, the existing maximum allowable concentration limit of 2.7 mg/L applies
Cyanide	0.5	No modification at this time
Lead	0.4	No modification at this time
Manganese	35.0	Delete local limit
Mercury	0.010	No modification at this time

Table 3 Adopted Local Limit		
Constituent	Existing Local Limits (mg/l)	Modification
Molybdenum	None	No addition at this time
Nickel	Group 1 2.6 maximum allowable and individual limits Group 2 either 1.1 daily maximum or 2.6 maximum allowable and 0.5 annual average Group 3 2.6 maximum allowable	<ul style="list-style-type: none"> For discharges of 1000 gpd or more, consolidate to one maximum allowable concentration limit of 0.5 mg/L For discharges less than 1000 gpd, the existing maximum allowable concentration limit of 2.6 mg/L applies
Selenium	2.0	Reduce local limit to 1.0 mg/L
Silver	0.7	No modification at this time
Zinc	2.6	No modification at this time
Total Phenol	30	No modification at this time
Xylene	1.5 and included in TTO limit	Delete local limit
Oil & Grease	150	No modification at this time
TTO	2.13	Delete local limit

The City submitted a local limits report entitled *2006 Industrial Waste Discharge Local Limits Update* to the USEPA and the Regional Water Board in June 2006, which described the local limits evaluation and recommendations. The Regional Water Board approved the report in June of 2007.

City of San José Sewer Use Ordinance Changes

Municipal Code Chapter 15.14 includes provisions that help enforce the federal pretreatment program requirements that fall into three general categories: 1) definitions, 2) regulations, and 3) local discharge limitations. Changes to the Code to reflect the new limits contained in the approved 2006 Local Limits Report and others proposed primarily in response to the US EPA Administrative Order (Order) issued on March 17, 2005 (CWA-307-9-05-36) or by staff to improve program clarity, were approved by the San José City Council in December 2007. The changes will also be included in all tributary agencies' sewer use ordinances, as each agency completes their local modification process.

Adoption of the Code changes prompts the issuance or reissuance of discharge permits. The City will now issue Zero Discharge Categorical Permits, instead of self-certification, for companies whose business processes fall into a federally regulated category but do not actually discharge wastewater from the categorical process into the sanitary system. Through the Order, the EPA also required changes to the City's permit document and required that the City reissue all of its

SIU permits. A permitting strategy was developed to reissue all 156 SIU permits by June 2009 with a major midpoint milestone of over 100 permits reissued for specific types of companies by June 2008.

Sector Loading Study

Sector loading sampling is intended to update the residential, commercial, and industrial source identification information for specific pollutants of concern. Although the main focus of the sector loading study performed during 2006 and 2007 was copper, nickel, and mercury, the samples collected were also analyzed for cadmium, chromium, lead, silver, zinc, and total dissolved solids.

Updated Results

The preliminary results of the sampling program conducted during 2006 were used to estimate the concentrations of copper, nickel, and mercury discharged from each of the sectors. The results for each pollutant for each sector are shown in the Table 4 below:

Table 4 Summary of Preliminary Sector Pollutant Levels (µg/l) from Sector Loading (2006)				
Pollutant	Residential	Commercial	Dental	Industrial
Copper	61	162	n/a	n/a
Nickel	5	23	n/a	n/a
Mercury	0.20	0.17	65.7	0.01

The average concentration was used to calculate a loading using the 2006 estimated flow for each sector (average concentration (mg/l) x 8.34 x flow (mgd) = loading (lbs/day)). The 2006 flow estimates for each sector were: Residential – 74 mgd, Commercial – 32.3 mgd, and Industrial – 8.3 mgd, and Dental - 0.5 mgd.

The sum of all the sector loadings was compared to the average daily headworks loading at the Plant, using the data collected for the filter bypass period from October 20 to November 20, 2006 for influent flow and concentrations. For 2006, the headworks loadings for copper, nickel, and mercury were 103.5 lbs/day, 11.9 lbs/day, and 0.26 lbs/day, respectively.

The preliminary estimated sector loading for each of the pollutants of concern is compared to actual Plant headworks loading in the following tables:

Table 5 Preliminary Sector Loading Estimates Compared to Plant Headworks (pounds per day)			
	Copper	Nickel	Mercury
Residential	37.9	3.1	0.12
Commercial	43.7	6.2	0.045
Dental			0.27
Industrial	3.8	1.8	0.0005
Total of all Sectors	85.4	11.1	0.44
Plant Headworks Loading	103.5	11.9	0.26
Difference (%)	-17	-7	67

Initial review of the data found that samples from one of the three commercial sites contained higher levels of copper than expected, and significantly higher than the other two commercial sampling sites. Work performed in 2007 focused on this site to determine why the copper results were significantly higher than the other sites and how representative the copper concentration was of copper discharges.

Additional work completed for this site in 2007 includes:

- Further evaluation and analysis of the data collected; the nature of the discharge from this site changed approximately half way through the sample collection period, with the higher results all coming during the first half of the sampling. The sample results from the second half of the sampling were similar to the results from the two other commercial sampling sites.
- Potential investigation of upstream discharges; some of the samples from this site appeared oily and had odors that indicated automotive sources. Identification of all the automotive shops that discharge through this sample site was completed and a list of the shops that generate and may discharge waste automotive fluids was compiled. The inspection database was also reviewed and it was verified that the automotive shops in that area are regularly inspected for compliance with stormwater and wastewater requirements. A total of 17 automotive facilities were identified in the area and 7 of these were inspected during 2007.
- Expanded or refined sampling; additional sampling was conducted at the commercial site with high results. During October and November 2007, 12 samples were collected from the sample site and analyzed for copper, as well as other metals and TDS. The sampling was intended to determine whether the higher or lower results were more typical of the wastewater flow through this sewer line, and if any subsequent inspection of the upstream facilities was necessary.

The results of the samples collected from this site in late 2007 are similar to the lower results found during the second half of the sampling done in late 2006 into early 2007 and are much closer to the results from the other two commercial sites. The inspection and resampling of the automotive sites discharging through this sewer line was not performed since the sample results were not abnormally high as they were in 2006. Table 6 below summarizes the sector loading copper results using the new data for commercial sampling site 1C. All other concentration data is from the 2006 sampling effort, while the flows used are from 2007.

Table 6 Updated Commercial Copper Concentrations	
Source	Copper Concentration (ug/l)
Commercial 1C	106
Commercial 2C	91
Commercial 3C	76
Commercial Average	91

The updated sector loading results using the new commercial sector loading results for copper, 2007 flow data, and 2007 headworks loading are shown in Tables 7-9 below. All the concentration values but the commercial copper one are from the 2006 sector loading sample results.

Table 7 2007 Copper Sector Loading Results			
Source	Copper Concentration (ug/l)	Flow (mgd)	Copper Loading (ppd)
Commercial	91	39	29.6
Industrial	*	7	3.9
Residential	61	67	34.1
Total of all Sectors		113	67.6
Plant Headworks Loading	103	113	97.1
Difference (%)			-30%

* Loading based on monitoring of Permitted Industrial Users.

Table 8 2007 Nickel Sector Loading Results			
Source	Nickel Concentration (ug/l)	Flow (mgd)	Nickel Loading (ppd)
Commercial	23	39	7.5
Industrial	*	7	1.4
Residential	5	67	2.8
Total of all Sectors		113	11.7
Plant Headworks Loading	16.6	113	15.6
Difference (%)			-25%

* Loading based on monitoring of Permitted Industrial Users.

Table 9 2007 Mercury Sector Loading Results			
Source	Mercury Concentration (ug/l)	Flow (mgd)	Mercury Loading (ppd)
Commercial	0.17	38.5	0.055
Industrial	0.01	7	0.0006
Residential	0.2	67	0.11
Dental	65.7	0.5	0.27
Total of all Sectors		113	0.44
Plant Headworks Loading	0.3	113	0.28
Difference (%)			56%

By using the new results from commercial sector loading sample site 1C, we observe a copper concentration more like the other two commercial sample sites and a commercial loading more representative of the commercial sector. However, the unknown amount of copper reaching the Plant headworks is significantly higher using this new data. The Plant Headworks loading for nickel and mercury were larger in 2007 than they were in 2006. This resulted in an increase in the unknown nickel loading for 2007. Changes in the flow estimates for the sectors also resulted in differences in the sector loading estimates for 2007. The Plant continues to meet all permit limits for copper, nickel, and mercury.

Program Evaluation Criteria

A variety of factors in addition to pollution prevention and pretreatment program enforcement activities affect mass loads and pollutant concentrations. For example, pollutant loads to the Plant could be reduced by:

- Economic downturns especially in large manufacturing and R&D facilities
- Water conservation
- Operational efficiency improvements
- Wastewater reclamation

On the other hand, pollutant loads could increase as a result of:

- Sewer discharge of wastewater previously sent to storm drains
- Infiltration and inflow from heavy rain
- Regional growth and business expansion due to economic prosperity and a pronounced change of business types and the service industry

Because these factors are difficult to quantify they complicate the evaluation of the Plant's pollution prevention and pretreatment programs. It also must be recognized that it is not generally possible to distinguish the effects of individual pollution prevention programs on overall pollutant loadings. Pollutant-loading data needs to be used as only one of many evaluation tools.

In addition to pollutant load data, the following criteria are used in regularly evaluating the effectiveness of the Plant's P2 programs:

- Number and variety of outreach materials distributed and feedback received
- Public awareness of pollution prevention issues
- Participation survey and evaluation results
- Results of surveys to targeted groups
- Quantity and total weight of HHW material collected from tributary area residents
- Number of residents using the HHW facility
- Number of City employees reached through newsletters and training
- Number or % of a targeted audience participating in a specific initiative
- Estimated load reductions from specific targeted activities.

A discussion of the efforts and results toward reduction of each of the POCs follows in Sections 5 through 10, incorporating the above evaluation criteria.

Section 4 *Regional Partnerships & Leadership Initiatives*

The City's key P2 accomplishments from a Clean Bay perspective can be measured through its various regional watershed activities in addition to what the City does within its own jurisdiction. The City participates in several regional outreach and pollutant monitoring efforts. Additionally, the City has adopted a number of sustainability initiatives which provide the opportunity to advance wastewater P2 efforts in a broader and more comprehensive context of environmental protection. These partnerships and leadership initiatives include:

- The Regional Monitoring Program;
- The Watershed Management Initiative;
- Green Business Certification;
- The UN Urban Environmental Accords;
- San José Green Vision;
- EPEAT: Green Electronic Purchasing; and
- Regional Outreach Partnerships

A general description of these efforts and accomplishments for 2007 follows.

Regional Monitoring Program (RMP)

The San Francisco Bay Regional Water Quality Control Board (Water Board) formed the Regional Monitoring Program (RMP) in 1993 to conduct water quality measurements and investigations to better manage environmental programs in the Estuary. The RMP is the primary source of information used to evaluate chemical contamination in the Bay. The RMP is a collaborative effort between the San Francisco Estuary Institute, the Water Board, and the regulated discharger community. The RMP focuses on determining spatial patterns and long-term environmental trends by: sampling water, sediment, bivalves, and fish; testing for effects on sensitive organisms; and estimating chemical loading to the Bay. The RMP program objectives include:

- Describing patterns in contaminant concentration and distribution
- Describing contaminant sources and loading to the Bay
- Measuring contaminant effects in the ecosystem
- Comparing monitoring information to relevant regulatory guidelines
- Synthesizing and distributing information from a range of sources

The City contributes financially to the RMP and provides in-kind staff support to support specific RMP pollutant studies. City staff is actively involved in the technical activities of the RMP, with staff chairing the RMP Technical Advisory

Committee. The City will continue its active support and participation in the RMP throughout 2008. RMP program highlights for calendar year 2007 are described below:

Reports

RMP findings are documented in reports that are made available by request and through its website (www.sfei.org/rmp/rmp_docs.html). Short summaries of on-going RMP activities and significant findings are presented in their newsletter (www.sfei.org/rmp/rmp_news.htm). Notable 2007 reports include:

Pulse of the Estuary

This report is a summary for managers and regulators of key findings regarding the Bay. This year's Pulse was a celebration of 35 years of the Clean Water Act. Feature articles in the 2007 edition included:

- *The State of the Bay: Water Quality.* This review of Bay water quality identified total mercury, methylmercury, PCB's, Dioxins, and Exotic Species as the "Biggest Water Quality Problems."
- *Trash in San Francisco Bay Area Urban Creeks – Sources, Pathways, Assessments, and Control Measures.* This article highlighted the work of SCVURPPP, the Lake Merritt (Oakland) Trash Control Program, and structural treatment controls for trash.
- *Copper in the Bay: Better Management Through Improved Scientific Understanding.* City staff co-authored this article showing that copper concentrations in the Bay have remained "steady since the late 1980s due to the large pool of contaminated sediment already in the Bay." The article also included a chart, contributed by the City, graphically illustrating the scientific rationale for the Water-Effect Ratios (WERs) determined for each Bay Region (toxicity of copper in laboratory water compared to Bay waters – Figure 2).

The copper WER and Site-Specific Objective (SSO) for Bay Region 5 was adopted by the Region and State Water Boards in 2002 and approved by the EPA in 2003. The WERs and SSOs for Bay Regions 1-4 were approved by the State Water Board on January 15, 2008 and need Office of Administrative Law and EPA approval to become law.

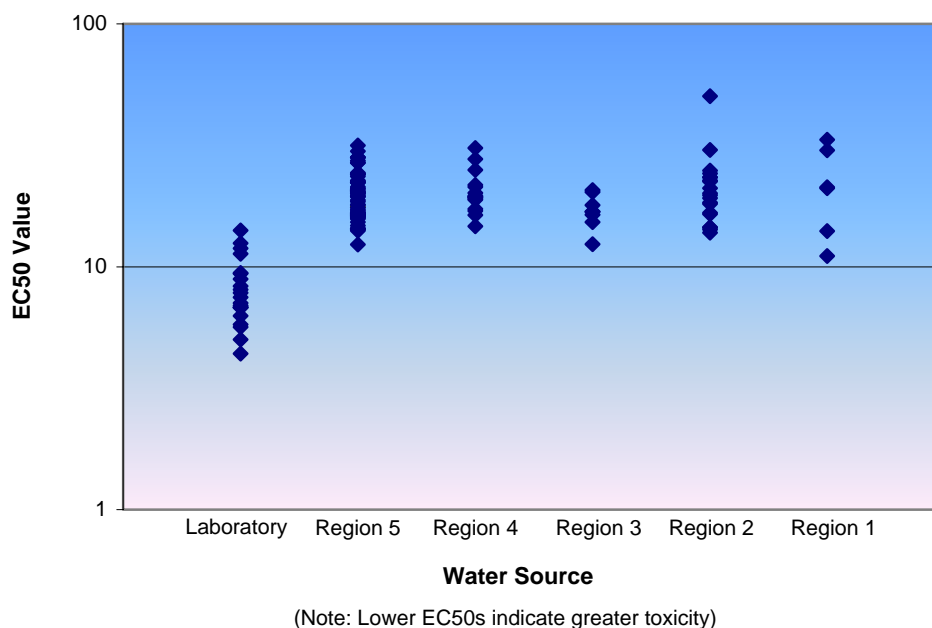


Figure 2. Laboratory and San Francisco Bay Water *Mytilus edulis* EC50 values for Bay Regions

Publications

RMP studies are frequently of interest to the wider scientific audience than those that participate in the RMP. In 2007, a special issue of the Journal of Environmental Research was devoted to the RMP summarizing ten years of monitoring the Bay. Several of the papers are posted on the SFEI website at:

http://www.sfei.org/rmp/rmp_docs.html.

Workshops

The RMP frequently holds workshops on select topics to disseminate new findings, to facilitate collaboration, and to develop consensus on areas that need further study. In 2007, the RMP sponsored the Annual Mercury Coordination Conference. This is the fourth year this workshop has been held and it has increased in size every year. Approximately 100 individuals attended in 2007. The goal of the workshop is to present the current understanding of mercury in the San Francisco Bay. Presentations from the workshop can be viewed at:

http://www.sfei.org/rmp/mercurymeeting/2007_4thAnnual/index.html.

Meetings and Conferences

In addition to hosting workshops, RMP findings are presented at meetings such as:

- Annual RMP Meeting at the Oakland Museum
- State of the Estuary Conference

- NorCal Society of Environmental Toxicology and Chemistry
- Society of Environmental Toxicology and Chemistry National Water Quality Monitoring Conference

Watershed Management Initiative

The Watershed Management Initiative (WMI) continues to implement the Watershed Action Plan through the actions of its subgroups, and through collaboration with other water policy and environmental stakeholder groups. City staff participates in most of the subgroups, chairs the Land Use Subgroup and the Watershed Education and Outreach Subgroup, and continues to support the WMI through the contribution of staff time for the position of WMI Coordinator. In 2007, the City also accepted the role of WMI co-chair and chair for the WMI steering group.

In 2007, the WMI supported stakeholder engagement and education at several events. The WMI and the City of San José were among the sponsors for the Santa Clara County Creeks Coalition Watershed Conference on November 17, 2007. City representatives and Santa Clara County watershed stakeholders participated in the event. Presentations included monitoring and restoration techniques as well as updates on current activities. WMI's Land Use Subgroup hosted two successful workshops on October 2, 2007 as part of the California American Planning Association Conference to educate frontline planning department staff on watershed health issues and site designs for water quality. Planners throughout the state attended the workshops held in San José.

In 2007, WMI held a group retreat where WMI participants brainstormed future priorities for the WMI. As a result of this session, the following four priorities were identified: trash, erosive forces/riparian setback, stream goals, and product stewardship.

Existing and newly formed workgroups will address each of the four priorities. A newly established Trash Subgroup will seek to address trash in creeks by evaluating the myriad of activities underway in the Santa Clara basin, identifying gaps, and initiating or promoting initiatives to address those gaps. The Land Use Subgroup will incorporate erosive forces and riparian setback issues into their work plan for 2008. A stream goals project is under consideration in collaboration with the San Francisco Estuary Project, in addition to a local project to develop an inventory of watershed planning activities in the basin to identify linkages and determine the utility of a separate stream goals project. Lastly, the Product Stewardship Subgroup is being formed to advocate for long-term, sustainable pollution prevention initiatives by encouraging participation in the California Product Stewardship Council, pilot a pharmaceutical collection program, and to coordinate on product and procurement actions.

Green Business Certification

In October 2004, the Santa Clara County certified the Environmental Services Department as a Green Business. All four of the department's work sites -

Municipal Water Systems, the Plant, Watershed Protection office, and the main office at City Hall - underwent the Green Business certification assessment. With the City's assistance and encouragement, the total number of Green Businesses in San José has grown to 72, including the San José City Hall.

The City supports the Green Business Program on several fronts. As a certified Green Business, it offers "Green" Brown Bags to all City employees, wherein employees learn about ways to reduce their environmental footprint at home as well as at work. Six "Green" Brown Bag sessions were conducted in 2007 with topics including safe cleaning products and an overview of the Green Building Program. The Environmental Services Department began the Green Business recertification process in October 2007 and is scheduled to complete all recertification audits by June 2008. ESD continues to encourage and support other City departments wishing to secure designation as a Green Business.

United Nations Urban Environmental Accords

The Urban Environmental Accords were developed by cities as part of the United Nations World Environment Day (June 2005) to provide a roadmap for cities as they work towards sustainability. More than 100 cities worldwide are signatories. The Accords detail twenty one Actions that cities can implement to become more environmentally sustainable. The number of Actions a city achieves determines its sustainability ranking; local (achieving 8 to 12 of the Actions), national (achieving 13 to 15 of the Actions), regional (achieving 16 to 18 of the Actions), or global sustainable city status (achieving 19 to 21 of the Actions).

On October 30, 2007, the City Council approved a goal and five year implementation plan for San José to achieve Global Sustainable City status by implementing 19 to 21 Actions that make up the Urban Environmental Accords covering energy/climate change, waste reduction and pollution prevention, urban design, urban nature, transportation, environmental health and water. The City Council also approved a five-year Urban Accords implementation work plan developed by staff from various departments across the City.

Based on staff analysis, a majority of the Actions are currently being implemented in existing City programs or will be part of anticipated initiatives. Of the 21 Actions, three link to the City's Pollution Prevention efforts and progress has been made on each:

UN Accords Action	Status
Action 5: Adopt a citywide law that reduces the use of a disposable, toxic, or non-renewable product category by at least fifty percent in seven years.	Staff is in the process of evaluating citywide adoption of an ordinance to prohibit non-compostable plastic check out bags in grocery and retail stores in San José. This is in coordination with the City's Zero Waste goal which was adopted in October 2007. Another product category under

UN Accords Action	Status
	consideration is polystyrene take-out food containers.
Action 16: Every year, identify one product, chemical, or compound that is used within the City that represents the greatest risk to human health and adopt a law to reduce or eliminate their use by the municipal government.	Enhancement of the existing Environmentally Preferred Purchasing policy is ongoing. Integrated Pest Management (IPM) Projects using goats, owls and bats in pest management and weed control efforts are underway and progressing.
Action 21: Address storm water pollution and reduce the volume of wastewater discharge by 10% in seven years through the expanded use of recycled water and the implementation of a sustainable urban watershed planning process that includes participants of all affected communities and is based on sound economic, social, and environmental practices.	The City's South Bay Water Recycling Program will be expanding in response to the Mayor's Green Vision goal to "Recycle or beneficially reuse 100 % of our wastewater." The 5 year recycled water goal is 23 mgd with the corresponding reduced volume of freshwater discharged to the San Francisco Bay. The City's long-term partnership with the Santa Clara Valley Water District has resulted in significant progress on conservation and water recycling projects.

San Jose's Green Vision

The San José Green Vision was adopted by City Council on October 30, 2007. The Vision contains 10 long-term goals which layout the roadmap of how the City will meet its commitment to the Climate Protection Agreement and the U.N. Urban Environmental Accords. San Jose's Green Vision goals are to:

- 1) Create 25,000 Clean Tech jobs as the World Center of Clean Tech Innovation
- 2) Reduce per capita energy use by 50 percent
- 3) Receive 100 percent of our electrical power from clean renewable sources
- 4) Build or retrofit 50 million square feet of green buildings
- 5) Divert 100 percent of the waste from our landfill and convert waste to energy
- 6) Recycle or beneficially reuse 100 percent of our wastewater (100 million gallons per day)
- 7) Adopt a General Plan with measurable standards for sustainable development
- 8) Ensure that 100 percent of public fleet vehicles run on alternative fuels
- 9) Plant 100,000 new trees and replace 100 percent of our streetlights with smart, zero emission lighting
- 10) Create 100 miles of interconnected trails

Promoting the Green Vision goals will provide opportunities to promote wastewater pollution prevention in a broader context of sustainability.

EPEAT: Green Electronic Purchasing

San José became the first city in the US to specify EPEAT (Electronic Product Environmental Assessment Tool) criteria as part of its purchasing practices and, in partnership with the Environmental Protection Agency and the Green Electronics Council, applied it to an RFP for computers in 2006. EPEAT provides an Environmental Benefits Calculator that measures the quantifiable benefits – green house gas reductions, waste avoided, pounds of mercury eliminated, etc. - and evaluates electronic products according to three tiers of environmental performance – Bronze: Product meets all required criteria, Silver: Product meets all required criteria plus at least 50% of the optional criteria, and Gold: Product meets all required criteria plus at least 75% of the optional criteria.

The City has purchased 1,015 Silver rated desktop computers and 1,042 Silver rated monitors resulting in the reduction of 5.36 metric tons of hazardous waste and the avoidance of 168 pounds of toxic material (including mercury) and green house gas emissions equivalent to 67 metric tons of carbon. In addition, the City also reduced its energy usage by 803,000 kWh as a result of these purchases.

The City's Information Technology Department's Replacement Policy now specifies that all future purchases of computer hardware meet the Silver EPEAT rating.

Regional Outreach Partnerships

Watershed Watch

The City participates in Watershed Watch, a campaign produced in partnership with WMI and SCVURPPP, which delivers pollution prevention messages to the residents of the Santa Clara basin using media, events and a website. City staff chairs the campaign advisory group and has been involved in the production of print and radio public service announcements, the design of the website as a means of communicating messages to a general audience in both English and Spanish, and the design and implementation of an Interpretive Sign installed at Happy Hollow Park and Zoo that features a montage of beneficial uses of creeks and the Bay, along with pollution prevention messages.

Regional Media Relations Committee

San José participates in the Regional Media Relations committee (RMR). The two goals of the media relations committee are to: 1) firmly establish the agencies as media contacts on water quality and pollution prevention issues, and 2) generate media coverage that encourages individuals to adopt behavior changes to prevent water pollution. In FY 06-07, the campaign continued to achieve these goals. Media placements were plentiful this year, with 37 media placements on four topics: pesticides; FOG (fats, oils and grease); mercury fever thermometer exchanges; and less-toxic lawn care. RMR messaging is coordinated with BAPPG and Watershed Watch campaign messages for topic and delivery timing.

The agencies that contributed funding to the campaign received a tremendous return on their investment. The cost of implementing the campaign was approximately \$50,000, funded equally by stormwater and wastewater agencies. The value of the coverage achieved in FY 06-07 is estimated to be \$69,200 if placements are viewed in comparison to the cost of advertising with these media outlets.

Our Water, Our World

The Regional IPM Partnership, a joint project between BACWA and BASMAA, completed its ninth year of the regional promotion of less-toxic pest control. The partnership encourages less-toxic methods of pest prevention and control by means of a point-of-sale program called Our Water, Our World. In FY 06-07, the OWOW promotion ran in over 170 Bay Area hardware stores and nurseries, ads were placed in several publications and store employee training sessions were conducted.

Bay Area Pollution Prevention Group

San José participates in the San Francisco Bay Area Pollution Prevention Group (BAPPG). Member agencies of the BAPPG work together to 1) Improve communication 2) Make the most effective use of public funds, 3) Coordinate regional pollution prevention projects, 4) Encourage and sponsor research and studies on topics related to pollution prevention, and 5) Develop regionally consistent public education messages and programs. This year BAPPG produced Bay Area wide outreach and activities to residents and businesses on mercury, FOGs, and pesticides. BAPPG facilitated a Bay Area wide thermometer take back, and coordinated a bay area-wide reprint of Grow-It-Guides, an important IPM piece. Participation in this group pays dividends through in-kind services, information and idea sharing, and strengthens our messaging to Bay area businesses and residents.

A summary of regional outreach activities in which staff participates is listed in Table 10.

Other Significant Activities

The City has made significant progress over the last 15 years to reduce pollutant loading to the San Francisco Bay. Some of the successes are measurable, as in the decrease in copper and nickel loading to the Plant, while others are not measurable yet, but are just as significant.

- The Plant is a recognized leader in monitoring efforts in the South Bay and provides water quality data, GIS information, and technical support for Bay-wide TMDL efforts as well as to the Federal and State Salt Pond Restoration project. This information and technical support is crucial to understanding the system and developing supportable TMDLs.
- The Plant has performed many special studies over the years to address TMDL uncertainties such as the South Bay copper Water-Effect Ratio study, the nickel criteria recalculation study, the cyanide attenuation study, and a treatment plant Mercury Fate and Transport Study has just been

completed that provides information on methyl mercury and total mercury discharged from our treatment plant.

- City Staff has lead roles on regional groups such as the SFEI. The Plant is a principal member of BACWA and as such provides resources that benefit dischargers Bay-wide.

The Plant has maintained compliance with all its NPDES discharge limits for pollutants of concern. As shown in Attachment 4, the concentration of copper, nickel, and mercury entering the Plant has remained steady over the last five years, as have the corresponding effluent concentration.

Table 10 Summary of Regional Outreach Activities 2007

Lead agency/ organization	Activity	Calendar Year 2007 Activity Description (Outreach conducted on a fiscal year basis is reported here for FY 06/07)	Pollutants of Concern/ Issues	Messages
BACWA/BASMAA		Bay Area Wide Partnership Outreach		
BACWA/BASMAA (Bay Area Clean Water Agencies and Bay Area Stormwater Management Agencies Association)	Regional Media Relations (RMR) Committee	Media Relations began the process of working with meteorologists to incorporate water pollution prevention messages into their broadcasts. In FY 06-07, 37 calendar listings, articles, broadcast and on-line stories were covered by the media, including 2 print articles, 15 radio stories, 14 web stories and 6 letters to the editor placements (including hard copy and web placements). There were no wire stories or television coverage this year. Public service announcements were pursued this year and resulted in 6 placements overall. Placements include media outlets that serve San José residents, including the San José Mercury News, the Associated Press, KGO-AM, KLIV-AM, KCBS-AM, KSJO-AM, KLLC-FM, and other local-serving print, web, and radio outlets. See the Regional Media Relations Campaign Final Report for full details.	Fats, oils, and grease (FOG), mercury, pesticides, and fertilizers.	Reduce the use of pesticides, FOG (fats, oils, and grease), mercury fever thermometer exchanges, and less-toxic lawn care. Concepts pitched include: First rains/first flush, information on the draft TMDL released by the Regional Water Board, tips for seeking the services of a pest control operator, and the use of pesticides.
BACWA/BASMAA	Regional "Our Water Our World" campaign	The City funds this project through BAPPG. This year the project continued training employees, setting up displays, modifying and distributing literature at stores in the Santa Clara basin. Integrated Pest Management (IPM) fact sheets and pesticide disposal information is also being distributed at farmers markets and other events by University of California Cooperative Extension Master Gardeners. More than 20 fact sheets on less toxic pest control and garden maintenance are available, and several have been translated into other languages including Spanish and Vietnamese.	Pesticides	Safe use and disposal of pesticides and fertilizers. Use of less toxic methods for pest control, landscaping and gardening (IPM).
BAPPG				
BAPPG	FOG Spanish	Delivered pollution prevention messages to Hispanic audiences in the 9-county San Francisco Bay Area.	FOG discharged to the sanitary sewer system	Ways to control fats, oils, and greases discharged to the

Table 10 Summary of Regional Outreach Activities 2007

Lead agency/ organization	Activity	Calendar Year 2007 Activity Description (Outreach conducted on a fiscal year basis is reported here for FY 06/07)	Pollutants of Concern/ Issues	Messages
	Radio Outreach	In FY 06-07, the project developed a new radio spot on how residents can reduce the amount of FOG entering the sewer system. The paid radio placements reached over 200,000 Hispanic listeners daily over a 4-week period, and generated more than 2 million impressions at a cost of about \$7.00 per thousand impressions. For 6 years, the City managed this radio outreach project. In FY 06-07, City staff acted as a resource and mentor, and assisted the new project manager.		sewer from residences and businesses.
BAPPG	Regional Thermometer Collection Event	From April through July 2007, the BAPPG coordinated a regional collection event for mercury thermometers and other mercury-containing devices. Twenty participating agencies and organizations collected 4,264 thermometers. Five thermometer exchange events were held in the tributary area during 2007. In addition to the outreach conducted through BAPPG, newspaper advertisements were placed in the San José Mercury News, and other community papers. Flyers were placed at local libraries and community centers.	Mercury	Reduce mercury pollution through proper disposal of mercury containing products, how to prevent wastewater, and stormwater pollution
WMI/SCVURPPP		Santa Clara Basin Partnership Outreach		
WMI/SCVURPPP	Media Advertising in the Santa Clara Basin - mercury	Print, radio and transit advertising in FY 06-07. The campaign targets residents including Hispanic adults in the Santa Clara Basin. The contractor estimates 20 million gross impressions for the campaign. Contributions from media partners more than tripled the value of the media package	Mercury	Proper disposal of fluorescent bulbs and the effects of mercury on the local watershed.
WMI/SCVURPPP	Zun Zun children's P2 play	The City co-funds 50 presentations annually of an interactive musical play, <i>The Musical Watershed</i> . The interactive, bilingual musical play, presented at assemblies, features musical instruments from multiple cultures, recycled materials, and a "tour" of the watershed from ridgeline to Bay designed to	Household chemicals including pesticides, fertilizers, cleaning products	P2 methods, watershed protection, water conservation, personal responsibility.

Table 10 Summary of Regional Outreach Activities 2007

Lead agency/ organization	Activity	Calendar Year 2007 Activity Description (Outreach conducted on a fiscal year basis is reported here for FY 06/07)	Pollutants of Concern/ Issues	Messages
		convey P2 and watershed messages in Spanish and English to school aged children in grades K-5 in the Santa Clara Basin. Public schools with high populations of Spanish, Asian, Filipino, and Pacific Islander students are targeted for presentations, though no school in the Program area is turned down (while supplies last). Teachers measure pre- and post-presentation knowledge of concepts and report back to SCVURPPP with data and comments. See SCVURPPP Annual Report for details.		
WMI/SCVURPPP	Event coordination Watershed Watch Campaign	Watershed Watch campaign staff attended 3 events: 1) Pumpkins in the Park, 2) South Bay Home and Garden Show, and 3) Happy Hollow Park and Zoo Haunt the Hollow event. Distributed material on a variety of P2 subjects.	Household chemicals including pesticides, fertilizers, FOG, cleaning products	P2 methods, watershed protection, personal responsibility.
WMI/SCVURPPP	Sign at Happy Hollow Park and Zoo Watershed Watch Campaign	An Interpretive Sign, installed in FY 03-04, features a photo montage of beneficial uses of creeks and the Bay, along with four pollution-prevention messages. In FY 06-07, 355,859 visitors attended Happy Hollow Park and Zoo; a 12% increase over last FY. The sign is located at the bottom of the entrance walkway into the Zoo. Every visitor to the zoo passes by the sign entering and leaving. In FY 07-08 the Park and Zoo will start a construction project to renovate and green several buildings, which may impact attendance numbers in the short-term.	Motor Oil, Pesticides, Proper Hazardous Waste Disposal, No Dumping to Stormdrains	Keep your car tuned to avoid oil leaks, avoid pesticide use (especially before rains), proper disposal of household hazardous wastes, and no dumping into storm drains.
WMI/SCVURPPP	Media Campaign Watershed Watch Campaign	Print and radio public service announcements in community newspapers and South Bay radio stations. Titles: "Watch out for Mercury Pollution" and "Watch out for Pesticides." Most recent campaign began July 24, 2006 and includes at least one PSA every week, alternating between formats, through June 2007.	P2	The concept is to have a consistent presence in the media to create a top-of-mind awareness of the messages. Evaluation of the campaign was inconclusive. Campaign will continue in FY 07-08 with media scheduled for 2008.

Table 10 Summary of Regional Outreach Activities 2007

Lead agency/ organization	Activity	Calendar Year 2007 Activity Description (Outreach conducted on a fiscal year basis is reported here for FY 06/07)	Pollutants of Concern/ Issues	Messages
WMI/SCVURPPP	Website Watershed Watch Campaign	The Campaign maintains a website, (with the revised address www.MyWatershedWatch.org) in both English and Spanish as a resource and means of communicating messages to it's general and targeted audiences.	P2	Web hits are steadily increasing, despite the recent switch to promoting the www.hhw.org site in PSAs. Most hits are generated from original points of entry with no referral service (meaning the user is entering the web address directly, not arriving via a search engine)
WMI/SCVURPPP	Spanish Language resource Watershed Watch Campaign	The City provided Spanish and Vietnamese language translation and proofreading services as requested to support the Santa Clara basin-wide Watershed watch outreach campaign.	Household chemicals including pesticides, fertilizers, cleaning products	P2 methods, watershed protection, water conservation, personal responsibility. Hispanic audiences are an important element of San José's pollution prevention strategies. 20% of Santa Clara Basin residents and 26% of City of San José residents surveyed identify themselves as Hispanic. While not all require messages in Spanish, a majority are more receptive if messages are offered in Spanish.
Other		Other Regional Efforts		
City/Santa Clara County, SCVURPPP	BOMA Byline Newsletter Articles	The City, in collaboration with the Santa Clara County Green Business Program and SCVURPPP, submitted four articles to the BOMA Byline newsletter with pollution prevention messages designed for facility managers: August '06: Water Efficient Toilets And Outdoor Conservation Can Save You Money November '06 Universal Waste Update February '07: Cleaning Your Buildings While Ensuring	Flow, Universal Waste, Copper, Sediment, Stormwater Treatment	Conserve water, properly dispose of universal wastes, utilize BMPs when performing surface cleaning, and information on operation and maintenance of common post-construction stormwater treatment devices.

Table 10 Summary of Regional Outreach Activities 2007				
Lead agency/ organization	Activity	Calendar Year 2007 Activity Description (Outreach conducted on a fiscal year basis is reported here for FY 06/07)	Pollutants of Concern/ Issues	Messages
		<p>Pollutants Are Kept Out of Our Creeks</p> <p>June/July '07: Stormwater Treatment BMPs: What you need to know about operation and maintenance</p> <p>The Building Operators and Managers Association Silicon Valley chapter publishes the BOMA Byline monthly. The BOMA Byline serves the counties of Santa Clara, Santa Cruz, San Benito, Monterey and San Luis Obispo.</p>		

In the early 1990's, the Plant faced compliance issues with the copper and nickel limits. The concentration of copper in the South Bay was believed to be harmful to aquatic life. In response, the City implemented Local Limits and its aggressive Clean Bay Strategy. In 1998, the City funded technical studies in support of potential TMDLs for copper and nickel in the lower South Bay. The impairment assessment study found that beneficial uses were unlikely impaired by ambient levels of copper or nickel in the lower South Bay. In 2003, the US EPA approved the delisting of copper and nickel for the South Bay as part of the 303(d) list update process.

As part of adopting site-specific water quality objectives for copper and nickel, the Copper and Nickel Action Plans (CAP/NAP) were developed through a stakeholder process that included the three South Bay Dischargers (San José/Santa Clara Water Pollution Control Plant, Palo Alto Regional Water Quality Control Plant, and the Sunnyvale Water Pollution Control Plant) as well as other Watershed Management Initiative (WMI) stakeholders such as the Regional Water Board and environmental interest groups.

The CAP/NAP calls for ongoing monitoring of receiving waters to gauge whether ambient dissolved copper and nickel levels are increasing in the South Bay during the dry season. CAP/NAP monitoring includes numeric triggers for dissolved copper and nickel concentrations that serve as the basis for requiring additional P2 actions if levels are exceeded. Trigger levels have not been exceeded since inception of the City of San José South Bay Monitoring Program in 1997. Figures 4-6 illustrate the locations of the ambient monitoring stations and the annual monitoring results for copper and nickel. The South Bay Monitoring Program 2007 Progress Report is included as Attachment 1. The CAP/NAP work plan and annual reporting tables are available online at <http://www.scvurppp.org/>.

The Plant has been in compliance with its copper and nickel permit limits since 1998. In addition, ambient Lower South Bay waters below Dumbarton Bridge have not exceeded the trigger levels of 4.0 and 4.4 µg/L for copper or 6.0 and 8.0 µg/L for nickel, established by the 2002 Basin Plan Amendment (Figures 5 & 6). Industrial copper and nickel loadings to the Plant have declined over the past 14 years (Figure 3).

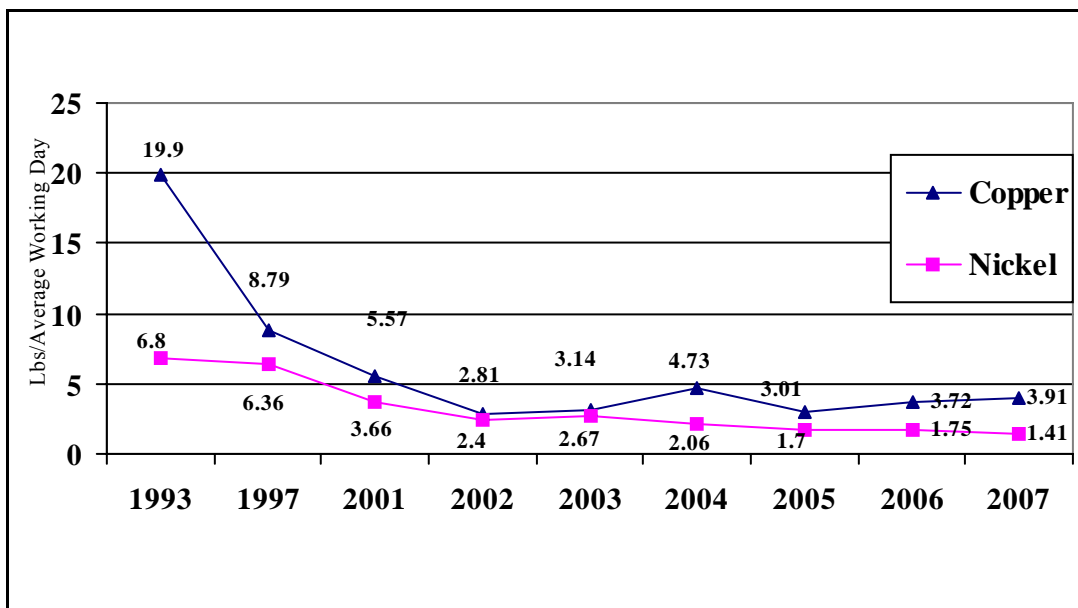
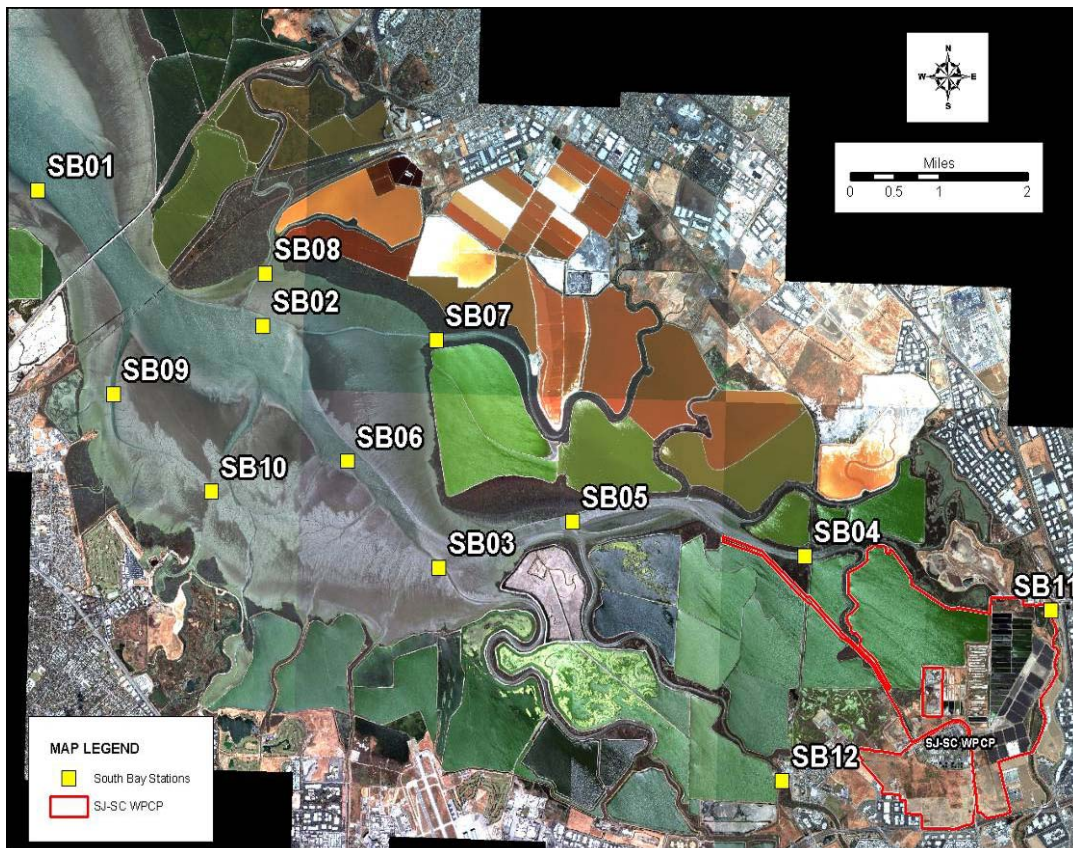


Figure 3. Average Daily Copper and Nickel Loading to the Plant



Source:
City of San José ESD
2004 IKONOS Satellite Imagery (Space Imaging Inc.)

Figure 4. Ambient Monitoring Stations

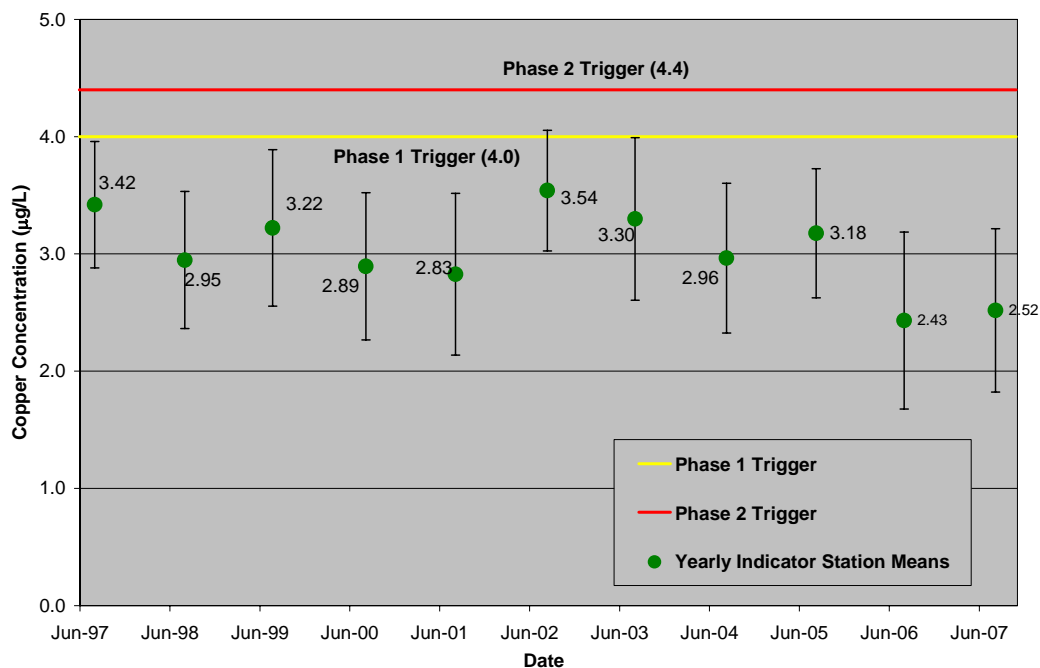


Figure 5. Dry Weather Dissolved Copper Means (\pm SD) for Indicator Stations

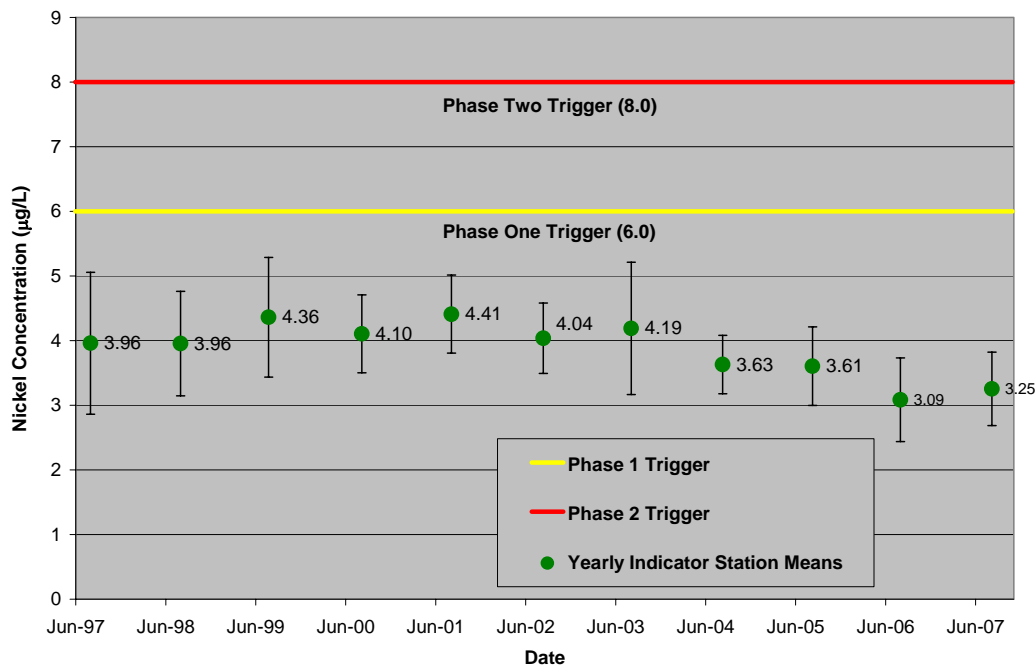


Figure 6. Dry Weather Dissolved Nickel Means (\pm SD) for Indicator Stations

Bay-wide Copper TMDL Efforts

For the past several years, the City has been an active participant in the North Bay (North of Dumbarton Bridge) Copper TMDL effort and in the Bay-wide Copper Management Strategy.

The proposed Basin Plan Amendment for copper, which marks the concluding phase of the copper TMDL effort, will establish a copper Implementation Plan. The new proposed Copper Management Strategy addresses the following sources: vehicle brake pads, architectural copper, copper pesticides, and industrial copper use. Efforts to address these sources are discussed in the staff report and related Water Board documents. The Regional Water Board staff report published March 2, 2007 recommends a single ambient trigger level for copper for each Bay Region and a single set of control measures should any numerical trigger level in any Bay Region be exceeded.

On January 15, 2008, the State Water Resources Control Board approved the Basin Plan Amendment (BPA) establishing copper Site-Specific Objectives for Bay regions north of Dumbarton Bridge. When the BPA, which includes the Bay-wide Copper Management Strategy, is eventually approved by the state Office of Administrative Law and EPA, the RMP will be tasked with monitoring copper in the Bay. Ongoing monitoring of Bay copper concentrations ensures that dissolved copper concentrations are not significantly increasing in the Bay.

During the North Bay copper SSO effort, two sources of technical uncertainty were identified by Regional Water Board staff. These were sediment copper concentrations and the sublethal effects of copper on salmonid olfaction. In 2005, the City published a Review of the Effects of Copper on Salmonid Olfaction that summarized the latest findings on this issue. The City of San José will continue to monitor copper and nickel levels in the Lower (South) Bay until such time as the EPA approves the copper BPA and the RMP begins to conduct ambient copper and nickel trigger monitoring in the Bay.

Copper and Nickel Sources

The Plant receives copper and nickel contributions from industrial, commercial, and residential sources. The largest contribution of copper and nickel comes from the residential sector followed by the commercial sector. Unfortunately, copper contributions from the residential sector are the most difficult to control because they primarily result from corrosion of copper water supply pipes and treated tap water supplies.

Some copper also enters the Bay via stormwater runoff from accumulation of residue from automotive metallic brake pads, industrial activities, and copper algaecides. Table 11 lists the known sources of copper and nickel to the Plant.

Table 11 Sources of Copper and Nickel in Wastewater		
Residential	Commercial	Industrial
Corrosion from copper water supply lines (Cu).	Corrosion from copper water supply lines and cooling water systems (Cu).	Corrosion from copper water supply lines and cooling water systems (Cu)
Treated tap water supply (Cu).	Treated tap water supply (Cu).	Treated tap water supply (Cu).
	Automotive repair and cleaning operations (Cu & Ni).	Industrial facilities that include metal finishing operations (i.e., electroplating, printed circuit board manufacturing, and disk and disk head manufacturing) (Cu & Ni).
	Machine shops (Cu & Ni).	
	Printing shops that use certain types of metallic inks (Cu).	

Copper and Nickel Estimated Loadings

The estimated percentage of copper and nickel loading to the Plant by sector is illustrated below in Figures 7 and 8, respectively. Measured industrial sources account for only 4% of the total copper and 9% of the total nickel loading to the Plant. The loading for the residential and commercial sectors was derived from concentration data from the 2006-2007 Sector Loading Study.

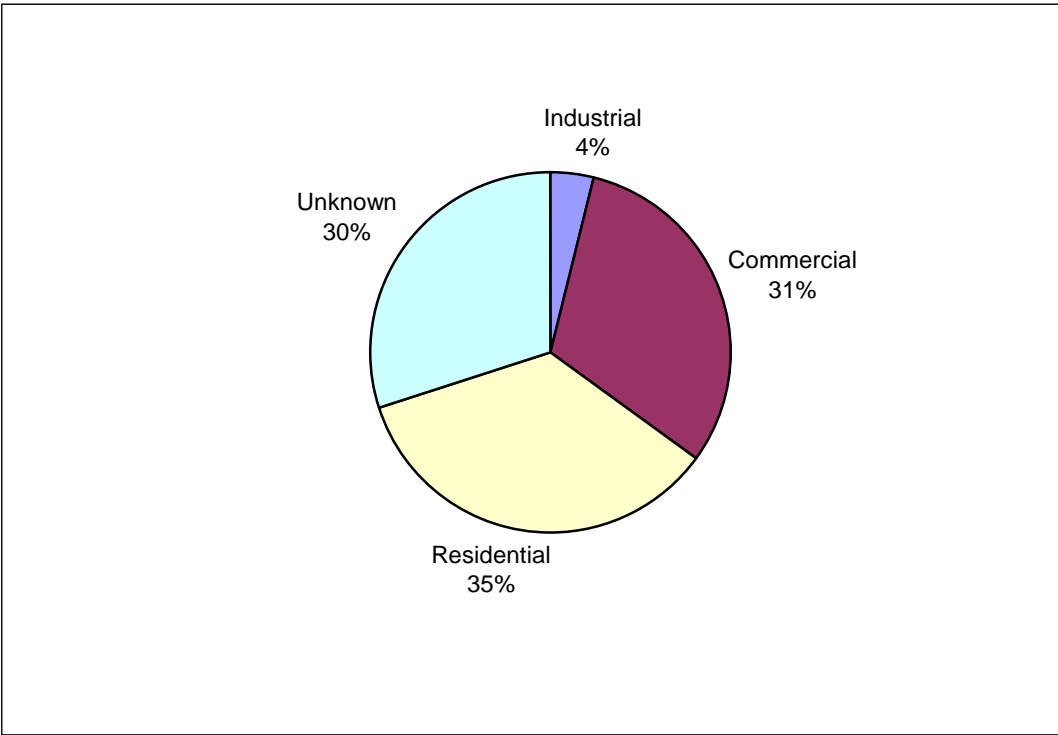


Figure 7. Copper Sector Loading

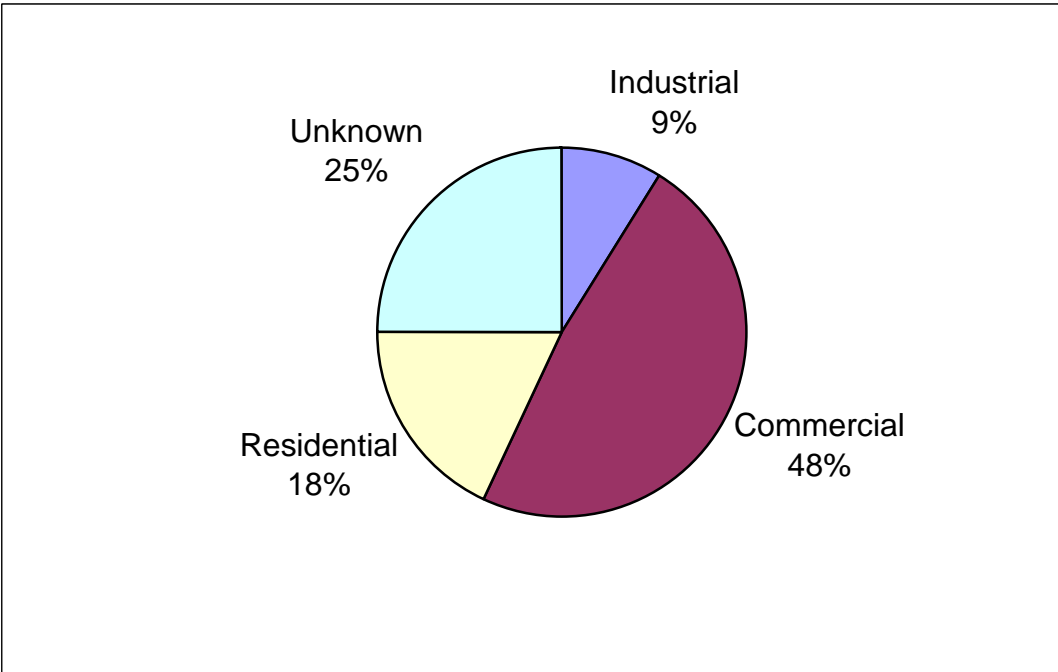


Figure 8. Nickel Sector Loading

Copper and Nickel Industrial Loading

The overall copper and nickel loading pattern has been trending downwards, with a 5-year trend of a relatively stable range. This is due to many factors including source control and pollution prevention, production efficiencies, fluctuations in the economy, and facility closures. Figures 9 & 10 illustrate the overall downward trend in industrial sector copper and nickel influent loading to the Plant since 1993.

Copper loading increased slightly in 2007, and nickel loadings decreased. However the 2007 loadings appear consistent with both the 10-year and 5-year trends for the respective pollutants. One of the largest dischargers of nickel ceased their local manufacturing operations, which is reflected in the decrease in industrial nickel loading.

On December 4, 2007, after Regional Board and EPA approval, the San José City Council approved final adoption of new copper and nickel local limits for industrial users of copper and nickel. Tributary cities and sanitation districts are expected to present the new limits for adoption to their governing bodies in early 2008.

The new local limits for copper and nickel are as follows:

For all industrial discharges of 1,000 gpd or more, the maximum allowable concentrations for copper and nickel, respectively, are 2.3 mg/l and 0.5 mg/l.

For all industrial discharges less than 1,000 gpd, the maximum allowable concentrations for copper and nickel, respectively, are 2.7 mg/l and 2.6 mg/l.

The pretreatment program will continue to take action to minimize industrial loadings to the Plant. In particular, surveillance monitoring will continue in 2008 on appropriate industrial users. Seven industrial users were discreetly monitored during 2007; enforcement actions were taken on all violations.

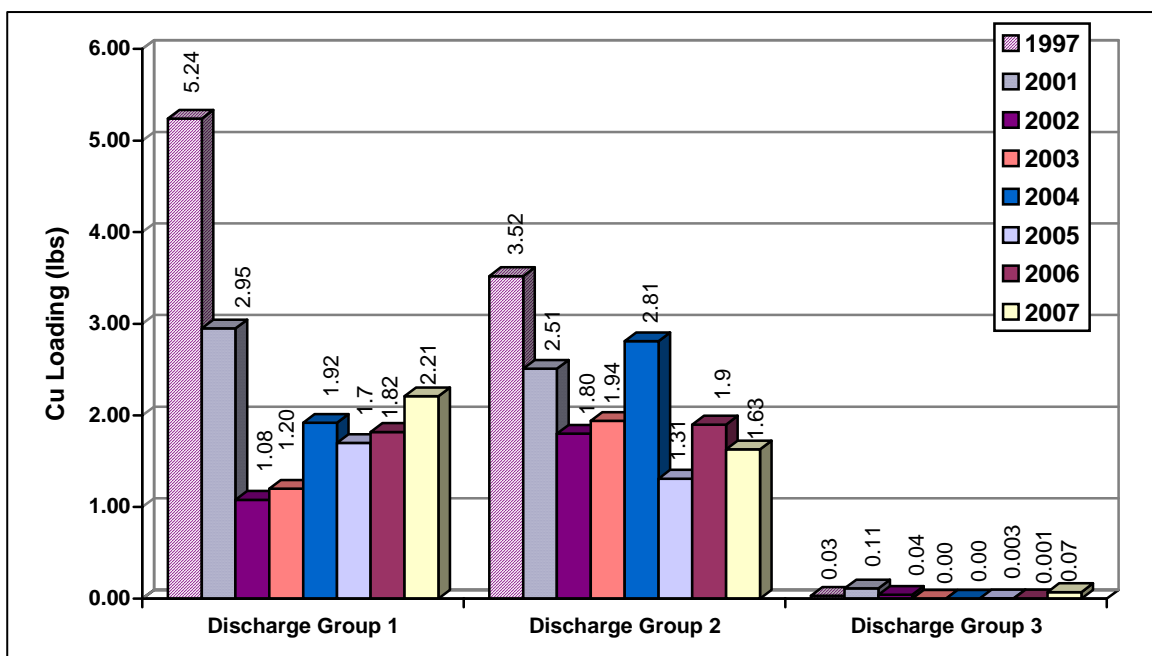


Figure 9. Average Daily Total Industrial Copper Loading

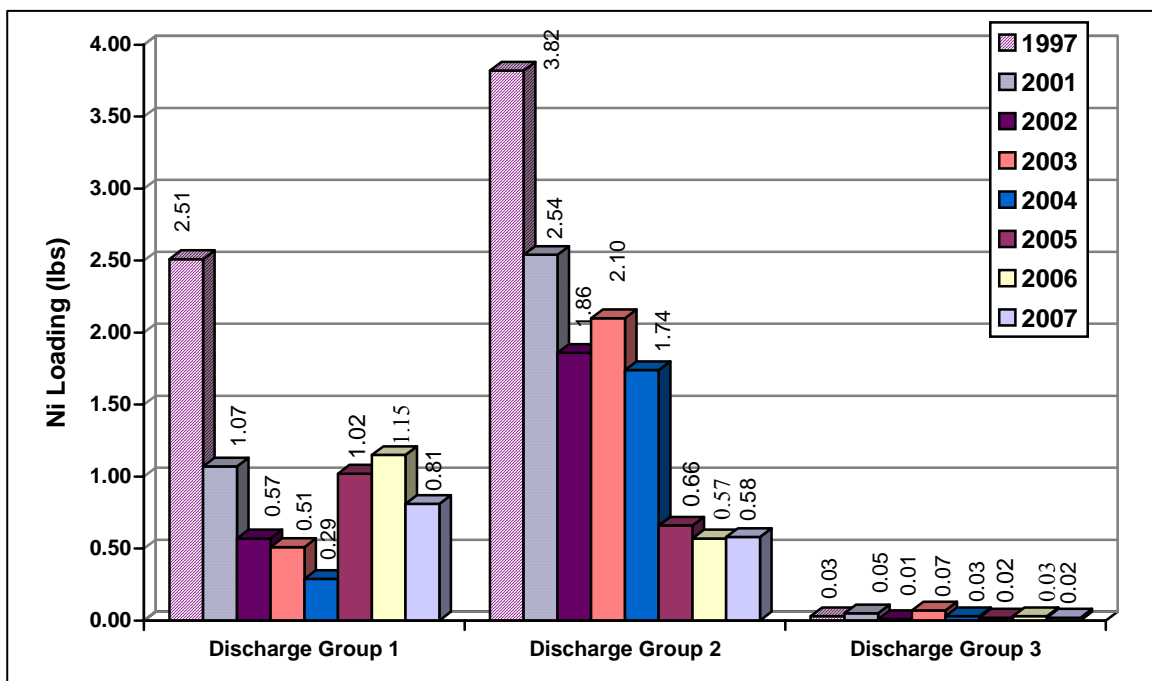


Figure 10. Average Daily Total Industrial Nickel Loading

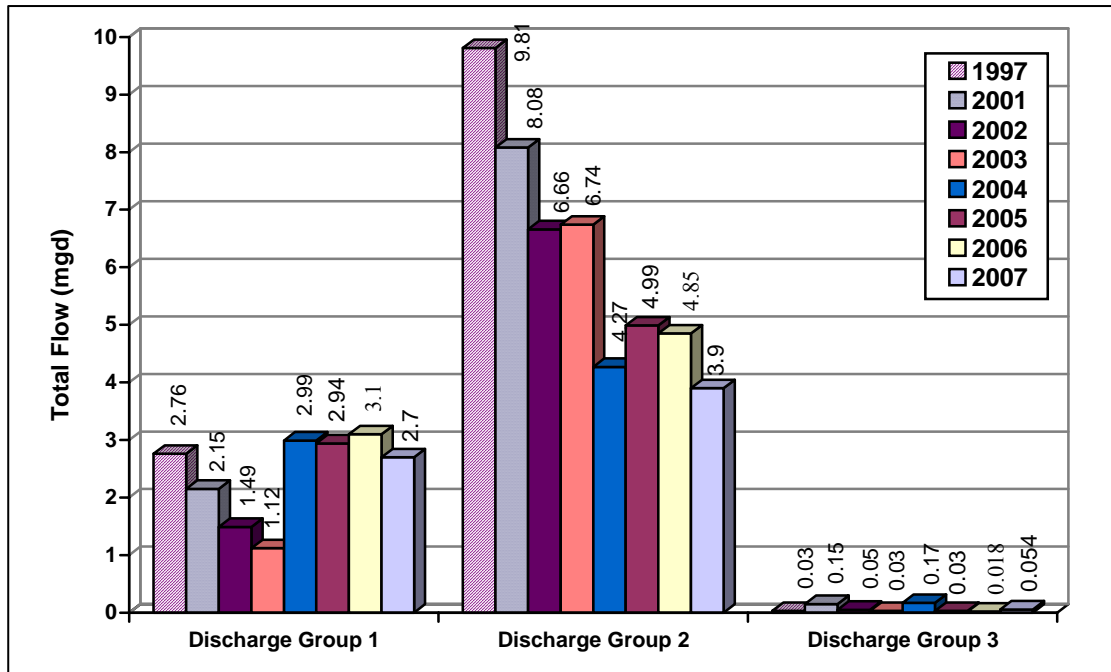


Figure 11. Average Daily Total Industrial Flow

Copper and Nickel Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan

The City's goals to address Copper and Nickel are to:

- Continue to perform Baseline Activities of the Copper Action Plan and the Nickel Action Plan
- Continue to monitor receiving waters to gauge whether ambient copper and/or nickel levels exceed the numeric triggers for dissolved copper or nickel, requiring additional P2 actions.

The following table contains a summary of activities the City will continue and new planned activities to accomplish these goals.

Table 12 Copper and Nickel Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan				
Source	Audience Message/Program	Implementation Tactic	2007 Evaluation	2008 Work Plan
COMMERCIAL / INDUSTRIAL				
Copper Pipe Corrosion	Plumbing Professionals Engineers and Designers of HVAC Systems <i>Follow Best Management Practices during installation</i> <i>Use less corrosive fluxes</i> <i>Use good design practices to minimize pipe corrosion</i>	Presentations to Plumbing Professional Organizations.	The last presentation to UAL 393 of Santa Clara County was conducted through BAPPG in 2006. The next presentation will be scheduled for Spring 2008.	Conduct copper pipe corrosion presentation to plumbers at UAL 393 training and Green Plumbers workshops through BAPPG. Target: greater than 80% indicating an improvement in awareness of installation and design practices.
		Distribute copper fact sheet developed by BAPPG at San José permit center.	Copper pipe fact sheets for were placed in the City of San José building permit center brochure holders. Approximately 523 copper pipe	Ongoing Track numbers of fact sheets distributed at permit center in San José and downloaded

Table 12 Copper and Nickel Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience <i>Message/Program</i>	Implementation Tactic	2007 Evaluation	2008 Work Plan
			fact sheets for installers and 1,169 for designers were downloaded from the City website.	from City website. Provide copies of fact sheet to centers throughout Tributary Area.
		Re-print two corrosion fact sheets developed by BAPPG to include ESD phone number & e-mail to facilitate feedback/questions.	Reprint was postponed to Spring 2008. The current versions of the copper corrosion fact sheets are posted on the City website and 523 were downloaded.	Work with Building Division to update content of fact sheets and reprint in June 2008. Track number of fact sheets distributed and downloaded from City website.
Metal-bearing wastewater from industrial and commercial operations	Permitted industrial users with copper, nickel, or other metal processes Metal machine shops, Metal finishers and Printed Circuit Board Manufacturers <i>Use water efficient technologies and implement flow reduction and water conservation projects</i> <i>Use best management practices and best available treatment technologies to minimize pollutant loading to</i>	Conduct presentations on the Water Efficient Technologies (WET) Program.	27 participants from 17 IUs attended the 2007 IU Academy, which included a presentation on WET. A question regarding the WET program was not included in the post workshop survey in 2007. It will be added to the survey in 2008.	Present program information at IU Academy scheduled for April 2008. Conduct a post workshop survey to measure IU awareness of WET program.
		Administer the WET Program and award financial incentives for qualifying flow reduction projects.	Completed 1 flow reduction project through the WET program in 2007. Total flow reduction for the project totaled 5,533 gpd with a \$4,483 rebate awarded.	Complete at least one WET flow reduction project in 2008.

Table 12 Copper and Nickel Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience Message/Program	Implementation Tactic	2007 Evaluation	2008 Work Plan
	<i>the Bay</i>	Author and publish "Success Stories" to highlight flow reduction projects completed by IUs.	The Winter issue of the Tributary Tribune featured an article on the availability of free Water Surveys for industrial companies in Santa Clara County through the Santa Clara Valley Water District. A WET Success story will be published in summer 2008.	Publish a WET success story in the summer 2008 issue of the Tributary Tribune to demonstrate effective ways to reduce water use and pollutant loading.
		Distribute "Guidelines for Industrial Wastewater Reuse" brochure as appropriate.	The <i>Guidelines for Industrial Wastewater Reuse</i> is available on the City website for download. 666 copies were downloaded from the City website and approximately 15 copies were distributed at the IU Academy. Completed <i>Guidelines for Efficient Water Use</i> booklet.	Ongoing Track numbers of <i>Guidelines for Industrial Wastewater Reuse</i> and <i>Guidelines for Efficient Water Use</i> distributed and downloaded from City website.
	Automotive repair and cleaning operations, printing shops and photo processors. <i>Use best management practices and best available treatment technologies to minimize pollutant loading to the Bay</i>	Inspect industrial facilities and commercial shops and distribute auto repair and machine shop BMPs.	In FY 06-07, 559 automotive, 33 machine shop, and 5 printing and photo processing BMPs were distributed during inspections.	Ongoing
	<i>Install vent covers and drip</i>	Distribute Roof Vent BMP fact sheet during inspections of select facilities.	In FY 06-07, a cover letter and Roof Vent BMP fact sheet was mailed to 101 industrial users.	Ongoing

Table 12 Copper and Nickel Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience Message/Program	Implementation Tactic	2007 Evaluation	2008 Work Plan
	<i>pans</i>	Refer companies to BASMAA's online Mobile Surface Cleaner Training Workshops.	In FY 06-07 companies desiring training were directed to the BASMAA online training program and offered a live training if they desired one. The City hosted training on April 6, 2007 for City staff and contractors who do surface cleaning work.	Ongoing
Industrial wastewater discharge	Permitted Industrial Users	Implement Nickel Event Surveillance Program	A surveillance program for nickel was initiated due to a March 2007 nickel influent loading event above two times the average annual nickel influent loading (there were no corresponding changes to the effluent nickel loading). This program will continue into 2008.	Complete nickel surveillance program and summarize results in 2008 Annual Report.
RESIDENTIAL				
Swimming pools, spas, and fountains	Residential / Homeowners <i>Select alternatives to copper algaecides</i> <i>Keep pool, spa, and fountain waters out of storm drains</i>	Distribute brochure at various events, in displays at public counters, and post on website.	Brochure was distributed at various events and public displays. Environmental Inspectors distributed 33 brochures in FY 06-07. It is also posted on the City website where it was downloaded 1,350 times in FY 06-07.	Ongoing Track numbers of fact sheets distributed and downloaded from City website.

Table 12 Copper and Nickel Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience Message/Program	Implementation Tactic	2007 Evaluation	2008 Work Plan
		Respond to resident inquiries about proper draining of pools and spas.	Provided information on proper draining of pools and spas to residents upon request. In FY 06-07 received 14 inquiries.	Ongoing Track the number of inquiries received.
Automobiles	<i>Benefit of alternative transportation</i>	Host “energizer station” for Bay Area Bike to Work Day.	Bike to Work Day was held on May 17, 2007. An estimated 300 people stopped at the “energizer station,” an attendance similar to last year. The countywide estimate for all bike commuters on Bike to Work Day is 27,000, an increase from last year. Distributed information on the benefits of alternative transportation, and stormwater and wastewater pollution prevention tips.	Ongoing
GOVERNMENT AGENCIES				
Plant effluent		Monitor Plant influent, effluent, and Lower South Bay to ensure that treatment processes are working and that industrial discharges and ambient Cu and Ni levels are not increasing significantly.	Monitoring at indicator stations was performed monthly throughout the dry season (for 2007, monitoring was performed monthly for the entire year).	Ongoing
Surface Cleaning	City Staff/Contractors who perform surface cleaning	Mobile Surface Cleaner Training for City employees	On April 6, 2007, the City held Mobile Surface Cleaner	Offer training as needed.

Table 12 Copper and Nickel Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience Message/Program	Implementation Tactic	2007 Evaluation	2008 Work Plan
	services	and contractors who perform surface cleaning services for the City.	training. 36 City employees and contractors attended, took the quiz, and received their two-year recognition	

THIS PAGE WAS INTENTIONALLY LEFT BLANK

Mercury is a pollutant of concern for the Plant based on a reasonable potential to contribute to an excursion above water quality criteria. This reasonable potential was determined due to background levels in the receiving waters being above the water quality criteria (using the State Implementation Plan Trigger 2), not due to levels in the Plant's effluent. However, due to the reasonable potential, Interim Daily Maximum and Monthly Average limits for mercury were included in the Plant's NPDES Permit.

Mercury is a concern for the entire San Francisco Bay due to its toxic properties. Mercury levels in the Bay have accumulated in some species of fish to such a level that health advisories are necessary, warning against consumption of large quantities of certain fish from the Bay.

In 2007, mercury monitoring issues were addressed through the Plant's mercury fate and transport study, participation in the bay-wide and Guadalupe River TMDL processes, in-kind and monetary contributions to the Regional Monitoring Program (See Section 3, Program Evaluation Summary), and various pollution prevention activities.

Mercury Fate and Transport Study – Final Report

This study was designed to examine the fate and transport of mercury through the Plant processes. Sampling of all relevant treatment streams for total, dissolved, and methyl mercury and ancillary factors began in October 2004, with special attention to mechanisms that might affect mercury bioavailability. Results show a highly efficient removal rate for total mercury (approximately 99%) correlated with the removal of solids. Methylmercury, dissolved methylmercury, and dissolved total mercury are removed at rates of 97, 73, and 53% respectively. Flows and concentrations of mercury in digested sludge appear to account for the mercury removal. There is no evidence of mercury methylation in the Plant. Focused studies related to internal mercury processing have been completed, and the final report was submitted to the Water Board in December 2007.

The San José/Santa Clara Water Pollution Control Plant Mercury Fate and Transport Study executive summary is included as Attachment 2 of this report. A complete copy of the report is available on the web at:

http://www.sanjoseca.gov/esd/pub_res.asp.

Mercury Sources

Mercury is considered a legacy pollutant, meaning that its presence in the Bay is primarily due to historical contributions. In the mid 1800's, liquid mercury (quicksilver) was widely used to recover gold in mining operations. The New Almaden Mine located in the South Bay was once the largest producer of mercury in North America and provided quicksilver for gold mines. Over time, stormwater runoff carrying mercury residuals from this and other abandoned mines in the Sierra Nevada has made its way into the Bay, accumulating in the sediment.

Sediment from gold and quicksilver mines remains the primary source of mercury deposition in the Bay today.

Secondary sources of mercury are summarized in Table 13.

Table 13 Sources of Mercury		
Residential	Commercial	Industrial
Erosion from dental amalgams	Dental, medical, and veterinary offices	No identifiable industrial sources of mercury
Mercury-containing products such as thermometers and fluorescent bulbs	Mercury-containing products such as thermometers and fluorescent bulbs	Mercury-containing products such as thermometers and fluorescent bulbs

Mercury Estimated Loading

From late 2006 into early 2007, samples were collected as part of the sector loading program at residential, commercial, dental, and industrial dischargers for mercury. Results indicate that dental procedures are the largest source of mercury to the Plant. Based on the results, the estimated total mercury discharged from the sector loading results (0.44 pounds per day) is significantly larger than actual mercury loading measured at the Plant headworks (0.27 pounds per day). The density of dental amalgam particles makes the collection of a homogeneous representative sample difficult. Some mercury may accumulate in the collection system and not reach the Plant. Both of these factors reduce the ability to accurately measure and compare the mercury concentration in the sewer and the Plant headworks. However, the results indicate that P2 efforts to reduce dental discharges of mercury would be most likely to achieve measurable reduction in mercury loading.

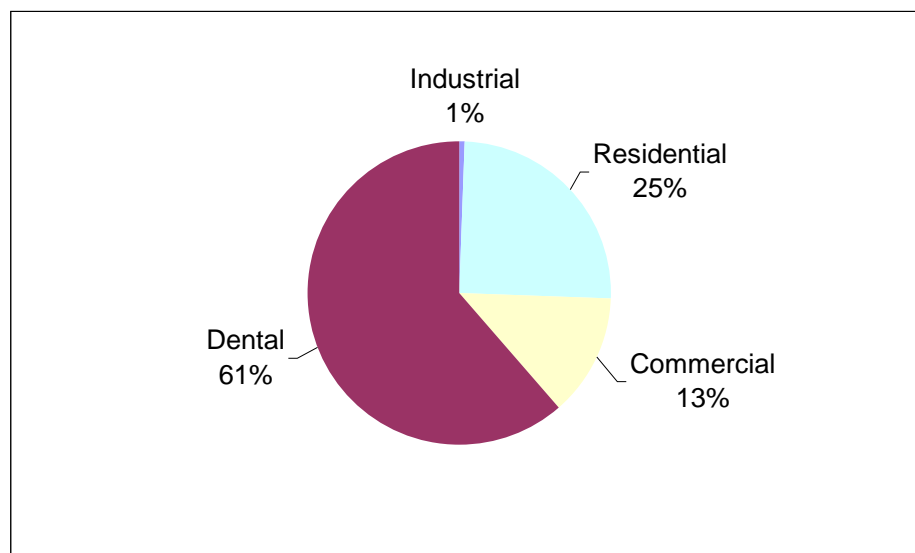


Figure 12. Preliminary Mercury Sector Loading

Mercury Pollution Prevention Program Efforts

Dental Mercury Amalgam Program

In 2007, the City continued to make progress toward implementation of a mercury dental amalgam program. In late 2006, the City issued a survey to 1,280 dentists in the tributary area to collect baseline information regarding their use and handling of mercury dental amalgam. Survey results were compiled in March 2007 and indicate that two-thirds of dentists responding to the survey use mercury amalgam; 25 percent already have an amalgam separator installed; and 78 percent follow the ADA best management practices for mercury dental amalgam. Pollution prevention staff refined the implementation timeline for the dental program, drafted preliminary forms and met with the City Attorney's office to develop ordinance requirements for the program. Plans for 2008 include gathering stakeholder input and City Council approval of the dental program ordinance.

Thermometer Exchange Events

The City worked collaboratively with regional partners on a public education program offering residents throughout the Bay Area an opportunity to exchange their glass fever thermometers for a digital one free of charge. A total of five Thermometer Exchange events were held in the tributary area in 2007. Three of the events occurred during the regional campaign effort, April through July, and the remaining two occurred later in the year. More than 500 tributary area residents and City employees participated in the events and exchanged a total of 1,346 mercury thermometers. Beyond offering attendees a free digital thermometer in exchange for their mercury containing one, these events educated residents on mercury pollution prevention, proper disposal of household hazardous waste, and general pollution prevention tips. The City plans to continue hosting thermometer exchanges in 2008.

Mercury Brochure

The City also developed a new educational piece in 2007 that explains the why mercury is a problem, how it contributes to wastewater pollution and poses potential human health issues. The brochure encourages residents to replace mercury containing products with less-toxic alternatives. It also educates residents about their options for properly disposing of mercury containing items. The brochure is distributed at all Thermometer Exchange events and various community outreach events.

Mercury Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan

The City's goals to address Mercury are:

- Participate in regional efforts to address mercury.
- Implement a Mercury control program to address high potential sources in the Plant's service area in conformance with the Baywide Mercury TMDL.
- Develop a comprehensive dental amalgam program with goal of achieving 85% amalgam separator and BMP implementation by 2012.

The following table contains a summary of activities the City will continue and new planned activities to accomplish these goals.

Table 14 Mercury Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan				
Source	Audience <i>Message/Program</i>	Implementation Tactic	2007 Evaluation	2008 Work Plan
COMMERCIAL / INDUSTRIAL				
Mercury containing medical devices	Hospitals <i>Replace devices containing mercury with less toxic alternatives</i>	Initiate contact with all (9) hospitals in tributary area to find out if they are aware of the State's Hg Elimination Leadership Program (HELP). Encourage them to be mercury free and become HELP partners. Document removal of mercury from their facilities.	Three area hospitals are HELP certified by the State DTSC for removing mercury from their facilities. Another area hospital is in the process of submitting documentation needed for certification. Contacted the 8 remaining hospitals in the area and all indicate that they have become virtually mercury free.	Follow up with the remaining hospitals that have not been HELP certified to encourage them to pursue certification.
Dental Amalgam	Dental Offices <i>Dental amalgam is an identifiable source of mercury. Install an amalgam separator. Follow dental BMPs</i>	Design and implement a comprehensive dental amalgam program. Target: 85% amalgam separator and BMP	See below for activity status.	See below for work plan activities. Track the following during implementation:

Table 14 Mercury Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience Message/Program	Implementation Tactic	2007 Evaluation	2008 Work Plan
		implementation by service area dentists by 2012.		Number of dentists with installed amalgam separators. Number of dentists following dental amalgam BMPs.
		<ul style="list-style-type: none"> Partner with Santa Clara Valley Dental Society to educate local dental practitioners about mercury issues and dental amalgam BMPs. 	Communicated with president of Dental Society to keep them apprised of progress in development of program.	Ongoing
		<ul style="list-style-type: none"> Conduct survey of area dentists to establish baseline information on dental BMP implementation. 	Survey on current practices was mailed in December 2006 to 1,280 dentists. Received 122 responses. 66% said they work with amalgam; 72% use amalgam more than 3 times a week; 25% said they have a separator installed; and 78% said their office follows the ADA BMPs for dental amalgam.	Completed March 2007
		<ul style="list-style-type: none"> Research and develop dental inspection program, and supporting database requirements. 	Draft work plan and timeline developed. Draft forms and database requirements identified and developed.	Ongoing
		<ul style="list-style-type: none"> Research and develop legal requirements such as Sewer Ordinance or Municipal Code revisions needed to implement dental program. 	Held coordination meetings with City Attorney's office. Developed draft ordinance.	Mandatory installation of dental amalgam separator ordinance scheduled to go to Council by October 2008. Ongoing coordination with City

Table 14 Mercury Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience Message/Program	Implementation Tactic	2007 Evaluation	2008 Work Plan
				attorney's office.
		<ul style="list-style-type: none"> Develop program brochures and other outreach and support materials for program. 	Originally scheduled to be completed between for March 2007 and September 2007. Rescheduled for September 2008.	Scheduled for September 2008.
		<ul style="list-style-type: none"> Begin targeted outreach to local dentists. 	Scheduled for October 2007-2010. Rescheduled to begin June 2009.	<p>Scheduled for June 2008 – 2010.</p> <p>Stakeholder input and general information distribution scheduled to begin June 2008.</p> <p>Track number of stakeholder meetings and attendees.</p>
		<ul style="list-style-type: none"> Ongoing program implementation and dental inspections. 	Scheduled for October 2007-2010. Rescheduled start date to January 2009.	Scheduled for January 2009 – 2010.
Industrial Users	Permitted industrial users <i>Pretreatment, Stormwater, and Pollution Prevention messages</i>	Deliver messages during IU Academy, offered to IU personnel in the tributary area.	<p>IU Academy was held on April 17. Agenda topics included mercury as one of several wastewater and stormwater management issues.</p> <p>A post workshop survey indicated that 100% of attendees found the workshop useful and increased their knowledge of pollution prevention. The Academy concluded with a tour of the Plant.</p>	<p>Annual IU Academy scheduled for April 2008. Workshop to include tour of Plant.</p> <p>Continue to track participant awareness of pollution prevention practices through workshop evaluation.</p>

Table 14 Mercury Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience Message/Program	Implementation Tactic	2007 Evaluation	2008 Work Plan
Fluorescent tubes and Mercury-containing devices	Businesses including customer lists from San José franchised haulers <i>Proper handling and disposal of universal wastes</i>	Distribute universal waste handling information to local businesses.	Partnered with PG&E to hold 15 classes for small businesses that included education on proper disposal of fluorescent bulbs, mercury containing devices and batteries. Fact sheet development is scheduled for spring of 2008.	Continue working with PG&E and City Energy Program to encourage proper universal waste disposal. Develop fact sheet on removing mercury containing devices prior to demolition. Coordinate with City's commercial recycling Construction Demolition Diversion Deposit (CDDD) program for distribution.
		Support the County of Santa Clara Department of Health (DEH) Household and Small Business Hazardous Waste program.	In FY 06-07, County DEH hosted weekly household and small business hazardous waste collection events. This service allows small businesses in the County to properly dispose of their hazardous wastes, including mercury-containing products. 418 small businesses were served, including local government agencies, Goodwill Industries and the Salvation Army.	Continue support of the County Household and Small Business Hazardous Waste Program.
RESIDENTIAL				
Fluorescent bulbs, thermometers, and other	Residential <i>Proper disposal of mercury containing thermometers</i>	Collect thermometers at Safe Medicine Disposal Event.	A small scale safe medicine collection was offered as part of the Pollution Prevention Week City Employee Resource	Publicize information on proper disposal at take back locations and through point of sale notices.

Table 14 Mercury Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience Message/Program	Implementation Tactic	2007 Evaluation	2008 Work Plan
mercury containing devices	<i>Proper disposal of fluorescent lights</i> <i>Proper disposal of universal waste disposal</i>		<p>Fair held on September 18. Thermometers were also collected at this event. Attendees were educated on proper disposal of unwanted medicines and other household hazardous waste, among other environmental issues. The City and SCVURPPP worked with the County to publicize its fluorescent tube drop-off program. SCVURPPP developed and implemented the "Watch Out for Mercury Pollution!" media campaign designed to encourage residents to take spent fluorescent lamps to any of 30 drop-off locations in Santa Clara County (up from 18 last FY). A "Got Bulbs" poster is displayed at participating retail drop off locations.</p> <p>The City participated in the California Product Stewardship Council to promote producer responsibility legislation including targeting mercury containing devices and pharmaceuticals.</p> <p>A website was developed that identifies universal wastes and disposal options. It also</p>	<p>Continue work with California Product Stewardship Council to promote legislation for producer responsibility.</p> <p>Monitor progress toward legislation.</p>

Table 14 Mercury Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience <i>Message/Program</i>	Implementation Tactic	2007 Evaluation	2008 Work Plan
			includes links to locate free drop off sites for batteries, fluorescents, and thermometers.	
		Participate in BAPPG Regional Thermometer Exchange and host Thermometer exchange events in South Bay.	A total of five Thermometer Exchange events were held in the tributary area in 2007 (May 12, May 16, June 16, August 21, and September 18). More than 500 tributary residents and City employees exchanged 1,346 thermometers. Distributed information on proper disposal of mercury containing products at all events.	Conduct a minimum of three thermometer exchange events in 2008. Track number of participants in events and number of thermometers collected. Evaluate feasibility of permanent exchange locations.
		Support and promote the Household Hazardous Waste Program	For FY 06-07 the HHW program recycled: 1,170 pounds of elemental mercury, 82,211 pounds of fluorescent lights, and 65,860 pounds of batteries.	See below.
		<ul style="list-style-type: none"> Provide San José location for HHW collection. 	The City continues to make progress on opening a new potentially permanent HHW collection facility in San José. An environmental review including a full Environmental Impact Report (EIR) was completed in early 2007. The	Continue HHW Program education through community meetings and door-to-door outreach. Continue providing one-day collection events until new drop-off facility is constructed and opened.

Table 14 Mercury Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience Message/Program	Implementation Tactic	2007 Evaluation	2008 Work Plan
			San José Planning Commission and City Council certified and accepted the EIR and relocation project in June 2007. The new drop-off facility is scheduled to open as an interim facility at this time in late 2008	
		<ul style="list-style-type: none"> Promote HHW at Events 	The City shared information with local residents at the 7th Annual Community Resource Fair on June 3, 2007. The fair was sponsored by the City Council offices. Approximately 7,000 people attended.	Continue as opportunities arise.
		<ul style="list-style-type: none"> Promote HHW in Campaigns 	The City and SCVURPPP worked with the County to publicize its fluorescent tube drop-off program. The program developed and implemented the "Watch Out for Mercury Pollution!" media campaign designed to encourage residents to take their spent fluorescent lamps to any of 30 drop off locations in Santa Clara County.	Continue Watershed Watch campaign in 2008 and conduct effectiveness evaluation.
		<ul style="list-style-type: none"> Promote HHW with Recycling Program(s) 	The Spring 2007 and Fall 2007 editions of San José's <i>Curbside Courier</i> featured new details on HHW and the proper ways to dispose of these materials	Continue as opportunities arise.

Table 14 Mercury Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience Message/Program	Implementation Tactic	2007 Evaluation	2008 Work Plan
			<p>using the drop-off program. The 2007 Annual Collection Service Notice (ACSN), distributed in November 2007, also provided residents with information to properly dispose/recycle HHW and e-waste. The <i>Curbside Courier</i> and ACSN reach approximately 200,000 single family households.</p> <p>San José's Recycle Plus <i>Guide to Garbage Recycling</i> was also sent to all households and includes information on e-waste, universal waste, and other pollution prevention tips.</p>	
		Participate in regional educational campaign on appropriate disposal of fluorescent bulbs. Incorporate proper bulb disposal information in Energy Program outreach materials.	In 2007, Silicon Valley Energy Watch, the City of San José's ongoing energy efficiency educational partnership program with PG&E, distributed more than 8,500 compact fluorescent light bulbs to residents and visitors to San José, along with detailed information about the 32 locations in Santa Clara County, primarily retail stores, that accept compact fluorescents for free mercury recovery and disposal.	Continue as opportunities arise.

Table 14 Mercury Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience Message/Program	Implementation Tactic	2007 Evaluation	2008 Work Plan
		Support producer responsibility for mercury containing products.	Actively supported regional efforts to address mercury including exploring universal waste legislation opportunities to require extended producer responsibility through participation in the California Product Stewardship Council.	Continue to participate on the CPSC. Monitor Progress toward legislation.
MUNICIPAL				
Fluorescent bulbs	City operations City employees <i>Purchase low mercury fluorescent lamps</i> <i>Recycle fluorescent lamps when replaced.</i>	Establish a Citywide program to purchase low mercury fluorescent lamps and to recycle fluorescent lamps when replaced.	The City recycled approximately 61,000 feet of mercury-containing fluorescent lamps in FY 06-07. The City continues to replace lamps with low mercury fluorescents as needed in all City facilities. Dismantled City lamp crusher and now recycle all lamps as universal waste.	Ongoing Track number of feet of mercury-containing fluorescent lamps purchased and/or recycled.
		Produce and distribute "Got Bulbs" posters/ info to City facilities.	Poster distribution to City facilities is scheduled to resume in 2008. Community centers are the distribution target.	Continue to provide posters as needed.
Universal Waste	City employees <i>Change in California Law regarding disposal of universal wastes</i>	Distribute information to employees through email, newsletters, or other mechanisms	The City's monthly orientation for new employees includes a presentation on the City's Recycle@Work Program, which includes a segment on	Ongoing

Table 14 Mercury Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience <i>Message/Program</i>	Implementation Tactic	2007 Evaluation	2008 Work Plan
	<i>Keep universal waste out of the garbage and how to properly dispose of them</i>		universal waste and proper disposal of batteries. Recycle@Work program expansion posters were posted at 35 facilities in 2007. Distributed information on universal waste disposal to employees at Pollution Prevention Week Employee Resource Fair.	
		Provide information during training opportunities.	Information on proper handling of universal waste was provided during Citywide Hazardous Materials Management meeting attended by 17 employees. Additional training conducted in June 2007 that included information on universal waste includes the Stormwater Pollution Prevention Plan Training for City Corporation Yards, attended by 92 employees and the DOT Crew Annual Training on Best Management Practices (BMPs) and Standard Operating Procedures (SOPs) and Corp Yard SWPPP Training, attended by 179 employees.	Provide information during Stormwater training sessions as appropriate.
Batteries	City employees <i>Proper collection, handling</i>	Make battery collection locations available to City	Collection made available at City offices.	Ongoing Track amount of batteries

Table 14 Mercury Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience <i>Message/Program</i>	Implementation Tactic	2007 Evaluation	2008 Work Plan
	<i>and disposal of City generated batteries</i>	employees.	In 2007, 5,958 pounds of alkali and rechargeable batteries were collected and properly recycled.	collected.
		Distribute information to employees through email, newsletters, or other mechanisms	The City's monthly orientation for new employees includes a presentation on the City's Recycle@Work Program, which includes a segment on U-Waste and proper disposal of batteries. Recycle@Work program expansion posters were posted at 35 facilities in 2007. The poster instructs readers not to throw batteries into the garbage and refers them to a website for instructions on proper disposal. Distributed information to employees at Pollution Prevention Week Employee Resource Fair.	Continue as opportunities arise.
	Water Quality Monitoring & Regional Efforts	Monitor mercury concentrations in Plant effluent. Voluntary, quarterly monitoring of mercury in Lower South Bay.	All Plant effluent results were well below permit limits.	Ongoing
		Participate in Bay-wide Mercury TMDL development.	TMDL has been approved by the State Board and is awaiting approval from EPA.	Ongoing

Table 14 Mercury Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience Message/Program	Implementation Tactic	2007 Evaluation	2008 Work Plan
			Provided review and comment on Mercury TMDL Basin Plan Amendment.	
		Participate in Guadalupe Mercury TMDL development.	Actively participated in Guadalupe River Watershed Mercury TMDL workgroup.	Ongoing
		Contribute financially to the RMP and provided staff support to operate a mercury sampling station as part of the Mercury Atmospheric Deposition Network.		Concluded in December 2006.

THIS PAGE INTENTIONALLY LEFT BLANK

The Cyanide Basin Plan Amendment recently adopted by the Regional and State Water Boards, if approved by the Office of Administrative Law and EPA will establish a chronic Site-Specific Objective of 2.9 µg/L (4-day average) for San Francisco Bay and a dilution credit of 3:1 (dilution of 2X) for the Plant. The Plant does not have an effluent limit in its 2003 NPDES Permit. However, the Site-Specific Objective will require the Plant to have an effluent limit. The Plant's historical data for cyanide as well as the results from the City's 2004 Attenuation Study indicate that the Plant is not likely to have a compliance problem due to disinfection-related cyanide levels in its discharge.

In response to elevated influent and effluent cyanide concentrations at the Plant, the City initiated a surveillance monitoring program in December of 2004. Results of the monitoring program found that Variety Metals Finishing was discharging high concentrations of heavy metals and cyanide. Evidence and data collected from the investigation were referred to the City Attorneys' Office and the Office of the Santa Clara District Attorney for enforcement action. On September 14, 2007, a settlement that includes civil penalties, cost recovery, and a mechanism for ensuring future violations do not occur was placed on the record before the Santa Clara County Superior Court. Final details of the settlement will be included in the 2008 Annual Report after final execution of the settlement.

Cyanide Sources

A primary source of cyanide at the Plant is the Plant itself. The City's 2004 Cyanide Attenuation Study reported an average increase in cyanide concentration of 0.9 µg/L from Nitrification to Final Effluent in the Plant's treatment process based on 25 measurements taken between September 2003 and June 2004. This increase was statistically significant ($P < 0.05$). This increase is attributed to the Plant's chloramination disinfection process. Many other wastewater treatment plants have experienced similar findings—higher levels of cyanide in the Plant effluent than in the influent. Table 15 lists a few other possible sources of cyanide to the Plant that are more easily controlled.

Table 15 Sources of Cyanide		
Residential	Commercial	Industrial
No significant sources of cyanide	Certain medical solutions in use	Electroplating operations

Cyanide Estimated Loading

The cyanide influent concentration levels have remained below the detection limit of 5 ppb since February 2, 2006. It is not possible to determine the exact breakdown for industrial cyanide loading versus commercial cyanide loading at this

time; however, the majority of the cyanide loading is expected from industrial electroplating operations.

Cyanide Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan

The City's goals to address Cyanide are to:

- Education, surveillance, and monitoring of industrial dischargers
- Control Plant operations

The following table contains a summary of activities the City will continue and new planned activities to accomplish these goals.

Table 16 Cyanide Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan				
Source	Audience <i>Message/Program</i>	Implementation Tactic	2007 Evaluation	2008 Work Plan
COMMERCIAL / INDUSTRIAL				
Industrial wastewater discharge	Permitted industrial users	Surveillance monitoring of IUs with cyanide processes with enforcement action for any violations found.	<p>Results of the monitoring program found that Variety Metals Finishing was discharging high concentrations of heavy metals, and cyanide. On September 14, 2007, a settlement was placed on the record before the Santa Clara County Superior Court.</p> <p>The Plant has experienced no cyanide pass-through events since 2005 and the cyanide influent concentration levels have remained below the detection limit since February 2, 2006.</p> <p>A cyanide fact sheet is available on the City website and is distributed as needed.</p>	<p>Provide education on cyanide issues associated with wastewater through fact sheets, as needed.</p> <p>Continue ongoing surveillance and monitoring of industrial discharges.</p> <p>Target: Decrease of influent levels of cyanide to the Plant coming from IUs.</p>

Table 16 Cyanide Pollution Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience <i>Message/Program</i>	Implementation Tactic	2007 Evaluation	2008 Work Plan
			None were distributed by inspectors in 2007.	
MUNICIPAL				
Plant Effluent	Plant processes and operations	Monitor and evaluate cyanide resulting from Plant treatment processes and operations.	Continued monthly monitoring of cyanide resulting from Plant operations.	Ongoing

Fats, oils, and grease (FOG) are produced from residential and commercial food preparation activities and are pollutants of concern due to increased regulatory focus on FOG-related sanitary sewer overflows.

In 2003, the Regional Water Board and BACWA formed a collaborative to develop a regional plan for reducing and preventing sanitary sewer overflows. One key outcome of the collaborative was the adoption of a Regional Water Board resolution (Resolution No. R2-2003-0095) that included a detailed work plan for working with Bay Area collection system agencies on the: 1) proper reporting of sanitary sewer overflows, and 2) development of sewer system management plans (SSMP).

One requirement of the SSMP is that each collection system agency develops a FOG control program. For this reason, FOG has been added as a pollutant of concern. It is important to note, however, that sampling of the Plant's effluent has consistently found a non-detect for oil and grease, and the Pretreatment Program has had a FOG component in place for over 20 years. For purposes of this report, only FOG activities implemented or supported by the City of San José are included.

FOG Sources

The primary sources of FOG entering the Plant are the commercial and residential sectors. Very small contributions of FOG are estimated to come from the industrial sector. Table 17 lists the main sources of vegetable and animal-based grease in the Plant's service area.

Table 17 Sources of FOG		
Commercial	Residential	Industrial
Restaurants	Single family homes	Food processing companies
Grocery Stores	Multiple family dwellings	Tallow companies
Hospitals/Social halls/Churches		Industrial laundries
Schools/Universities		Meat Packing
Shopping mall/Food courts		
Bakeries		

FOG Estimated Loading

Approximately 640 tons of grease were removed by the Plant's primary treatment during 2007. This is relatively consistent with the 650 tons removed in 2006. These quantities will be evaluated as a potential performance measure.

Sanitary Sewer Overflows

Within the City of San José, the Department of Transportation (DOT) sewer crews are primarily responsible for maintaining the collection system and clearing blockages in the sanitary sewer. Some of the blockages in the sewer lines may result in a sanitary sewer overflow. Since December 2004 the City has been reporting all overflows greater than 100 gallons to the Regional Water Board electronic reporting database in accordance with the Water Code Section 13267 letter from the Regional Board. However, in March 2007 the overflow reporting requirements of the Regional Water Board were superseded by statewide electronic reporting requirements described in Waste Discharge Requirement 2006-003 from the State Water Board. The City is now required to report all overflows into a publicly accessible statewide electronic database. The City began reporting overflows into this database in May 2007. The reports include the location, time, volume, and cause of the overflows, as well as the volume, if any, that was not recovered during the cleanup. There were 189 reported sanitary sewer overflows during 2007, of which City sewer crews identified a total of 160 caused by grease. The collection system for the Plant's tributary agencies are managed and maintained by their respective agencies.

Sewer System Management Plan (SSMP)

In August 2006, the City submitted certification to the Regional Water Board that the Fats, Oils, and Grease (FOG) section of the Sewer System Management Plan was completed. The deadline to certify the FOG section to the State Water Board is November 2, 2008; however, the City certified this section in August 2007. The FOG section describes the three key elements of the City's FOG program: 1) plan checks for food service establishments, 2) routine inspections of food service establishments, and 3) investigations of sanitary sewer blockages caused by grease.

Plan checks are performed for all food service establishments being built or remodeled in the Plant's tributary area as part of the building permit process. The requirement for installing an appropriate type and size of grease removal device is the focus of the plan check. Factors such as the size of the restaurant, type of food served, and kitchen equipment in use are evaluated to determine the requirement for a grease removal device. Requirements range from a 40-pound grease trap to a several thousand gallon grease interceptor. The applicant must certify that grease traps will be serviced a minimum of once per month and grease interceptors will be cleaned a minimum of once per quarter.

Food service establishments in San José are inspected for compliance with Best Management Practices (BMPs) related to stormwater discharges, grease management, and grease removal device maintenance. During FY 06-07, 1,862 food service establishments were inspected. A major component of the FOG inspection program is educating food service owners, managers, and workers. A number of related BMPs have been developed to assist with education efforts. These BMPs are distributed to food service establishment operators to help them achieve and maintain compliance. Additional BMPs will be developed in 2008.

Enforcement actions are taken against any food service establishment that does not clean their grease removal device at the minimum frequency or keep records documenting the cleaning. Food service establishments are re-inspected a minimum of once every three years, or more frequently as determined by the number of violations observed. If a facility is found to have violations it will continue to be re-inspected until all violations are corrected.

FOG program staff responds to reports of grease blockages in the sanitary sewer from collection system agencies throughout the tributary area. Food service establishments upstream of the grease blockage are inspected for compliance with requirements for grease removal device installation and maintenance. Corrective actions are taken, and additional requirements are placed upon the facilities as appropriate. In 2007 FOG program staff performed 34 grease investigations, involving 44 facilities. A total of 82 inspections were conducted in connection with grease investigations. Grease investigations typically require multiple inspections to ensure compliance. The FOG program anticipates that grease investigations will continue to comprise a significant portion of its workload in 2008.

FOG Program Expansion

The City has been inspecting food service facilities for five years with focus on stormwater and grease related issues. These inspections were conducted as part of the stormwater industrial facilities inspection program (IND). In 2006, the City approved additional staffing to focus on grease generating facilities. In 2007, the City formed a separate FOG section with dedicated staff to inspect food service facilities. This new section performs inspections with emphasis on reducing the amount of grease going to the sanitary sewer while continuing to monitor and address stormwater issues.

The City continues to evaluate potential for improvements for the FOG program. Examples include increasing training, developing updated and new policy and procedures, establishing additional inspection processes, developing new residential and commercial outreach, and cultivating better communication between inspectors and sewer maintenance crews. The City is also preparing to review and update the City's Municipal Code to support the FOG program. This project will involve a survey of other jurisdiction's municipal codes and programs to identify tactics that will work in the FOG program service area. The amendments to the San José Municipal Code are anticipated to include both revisions to specific provisions as well as the addition of new sections that will allow for a better FOG program.

The City is also considering expansion of FOG inspection service to other jurisdictions within the Plant tributary area. In 2007, the City initiated discussion regarding this proposal with tributary partners. The City submitted a budget proposal that aims for the City to begin providing restaurant and food service inspections throughout the tributary area in 2009.

The City is evaluating the addition of a FOG receiving station at the San José/Santa Clara Water Pollution Control Plant (Plant). The concept is to provide

a facility where local grease haulers could discharge their FOG material. The FOG would then be digested to generate methane gas which in turn would be used to generate electricity. If feasible, this addition will be constructed in conjunction with the currently planned Digester Rehabilitation Project. A consultant contract to develop the design for the Digester Rehabilitation Project is scheduled to be awarded in March 2008. It is anticipated that the design process will take up to a year, after which bids will be solicited for a construction contract. Concurrent with work to develop digester rehabilitation design, the City will also have a consultant perform a market survey of FOG commercial sources and likely FOG loads that would determine the size and capacity of a FOG receiving station at the Plant. This evaluation will also include traffic and feasibility analyses for the construction and operation of the station. Assuming evaluation of the receiving station proves promising; construction could start in the latter half of 2009 and be completed by the end of 2010.

State and Regional FOG Efforts

BAPPG

City staff attended a workshop entitled, *Reducing Sanitary Sewer Overflows through Fats Oils and Grease Control* on March 13, 2007. The workshop cosponsored by the BAPPG included discussion on a variety of regional FOG collection issues. In 2008, the City will work together with BAPPG partners to develop a regional FOG hauler management program. The objectives of the project are: 1) to standardize and disseminate FOG hauling requirements in the Bay Area counties to ensure compliance with recently adopted state regulations and, 2) to develop a regional FOG disposal tracking/manifest system for grease haulers.

Cal FOG

City staff participates as a Steering Committee member of the California Fats, Oils, and Grease workgroup (Cal FOG). Cal FOG's mission is to identify actions for reducing sanitary sewer overflows (SSOs) that result from blockages caused by fats, oil and grease in wastewater collection systems, and implement those actions to the extent feasible by a stakeholder group which includes wastewater agencies, regulators, restaurant representatives, and other industry associations. The work group is formed within Tri-TAC, a technical advisory committee representing municipal wastewater management agencies. Tri-TAC members include the California Association of Sanitation Agencies (CASA), the League of California Cities, and the California Water Environment Association (CWEA). Additional information about Cal FOG can be found on the internet at www.calfog.org.

CWEA Pollution Prevention Committee Meeting

The City hosted the CWEA PS3 Committee meeting in December 2007. During this meeting City staff gave a presentation on the City's FOG program. The presentation included a discussion of the BMPs currently used by the City. The presentation and the BMPs have been uploaded to the Cal FOG website.

Fats, Oils & Grease Prevention Plan – 2007 Evaluation and 2008 Work Plan

The City's goal to address FOG is:

- Minimize the occurrence of sanitary sewer overflows, due to grease, as part of a comprehensive Sewer System Management Plan

The following table contains a summary of activities the City will continue and new planned activities to accomplish these goals.

Table 18 FOG Prevention Plan – 2007 Evaluation and 2008 Work Plan				
Source	Audience Message/Program	Implementation Tactic	2007 Evaluation	2008 Work Plan
COMMERCIAL / INDUSTRIAL				
Commercial Food Preparation	<p>Restaurant owners and operators</p> <p>City Inspectors</p> <p><i>Reduce amount of FOG entering sanitary sewer to prevent blockages of sewer lines</i></p> <p><i>Proper disposal of FOG</i></p> <p><i>What to look for when inspecting grease interceptors</i></p>	<p>Inspect restaurants and other food service facilities in San José for compliance with BMPs related to stormwater discharges and grease removal device maintenance.</p>	<p>In FY 2006-07, 1,862 food service facilities were inspected.</p> <p>49% of facilities had one or more Areas of Concern (AOC) with a total of 1,526 AOCs found for all facilities. This represents a decrease from FY 05-06, when 57% of facilities had one or more AOCs.</p> <p>A total of 461 warning notices and 4 administrative citations were issued.</p> <p>The amount of FOG removed at the Plant during 2007 was 640 tons. This is consistent with the 650 tons removed in 2006.</p>	<p>Continue to expand the FOG inspection program to improve the FOG control programs as required in SSMP requirement. This will include ordinance revisions to support inspection program improvements.</p> <p>Target: Percent decrease in the number of facilities with recorded Areas of Concern.</p> <p>Target: Percent decrease in reported blockages attributed to FOG.</p> <p>Target: Inspect 1,300 food facilities and distribute BMPs as part of inspection.</p> <p>Expand the FOG inspection program to other tributary areas.</p> <p>Target: Reduced tonnage of FOG removed at Plant primary</p>

Table 18 FOG Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience Message/Program	Implementation Tactic	2007 Evaluation	2008 Work Plan
				treatment.
		Distribute grease management information to inspected restaurants and other FOG generators. Fact sheets address both wastewater and stormwater issues for restaurant owners, operators, and employees. Materials include: a folder with good cleaning practices information; laminated poster with info in English, Spanish, and Vietnamese; six unique fact sheets (available in three languages), and a sample cleaning documentation log.	7,336 FOG related information pieces were distributed to inspected facilities and a new <i>Grease Interceptor & Grease Trap Cleaning Services</i> providers list was developed in FY 06-07.	Ongoing Develop additional residential and commercial outreach pieces as needed.
		Inspect restaurants in response to DOT reports of grease blockages or unusual build-up of grease in sewer lines.	Investigated 34 grease related complaints involving 44 facilities. At total of 82 inspections were conducted. 111 AOCs were identified through these investigations and all facilities with AOCs were re-inspected for compliance. 176 BMPs were	Inspect and educate owners and operators of food service facilities on BMPs for grease management. Continue to respond to and investigate grease related blockages and spills. Continue work to reduce grease

Table 18 FOG Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience Message/Program	Implementation Tactic	2007 Evaluation	2008 Work Plan
			distributed and 3 Administrative Citations were issued.	related sanitary sewer blockages.
		Conduct plan checks for all new and remodeling restaurants and other food service facilities in Plant Tributary Area to determine proper grease removal device sizing.	Performed a total of 209 plan checks for tributary area food service facilities.	Ongoing
		Hold on-site training for identified restaurants where FOG problems have been observed.	Presented an on-site training for food service workers at the Franklin McKinley School District in October 2007.	Continue as opportunities arise.
		Conduct Grease Interceptor Training Workshop for City inspectors.	Vendor training on the Big Dipper grease removal device was held for inspectors on May 24, 2007. Continued ongoing informal field training of inspectors on traps and interceptors.	Continue as opportunities arise.
		Participate in the development of a multilingual food handling poster for restaurant grease through BAPPG. Distribute poster during inspections as appropriate.	Development of poster was completed in 2006. Inspectors distributed poster and other pieces during inspections as appropriate in 2007.	Poster development completed, in 2006. Distribution of poster is ongoing

Table 18 FOG Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience Message/Program	Implementation Tactic	2007 Evaluation	2008 Work Plan
Commercial Food Preparation	Grease haulers, food service enterprises, and Tributary agencies	Participate in tributary and regional efforts to develop and implement a grease hauler certification program.	City staff attended a workshop, entitled, <i>Reducing Sanitary Sewer Overflows through Fats Oils and Grease Control</i> on March 13, 2007. The workshop cosponsored by the BAPPG, included discussion on a variety of regional FOG collection issues.	Work with South Bay dischargers or regionally to develop a grease hauler certification program.
RESIDENTIAL				
Residential food preparation	Residents <i>Reduce amount of FOG entering sanitary sewer to prevent blockages of sewer lines</i>	Participate in developing and delivering grease related messages through the Regional Media Relations workgroup and BAPPG.	In FY 06-07, a press release was developed and distributed for the holiday season. The pitch resulted in regional radio coverage on KGO-AM, KCBS-AM, KLIV-AM, and KSFO-AM. The stories included proper disposal information and quotes and/or interviews. A total of sixteen placements were achieved from this pitch.	Continue as opportunity arises to deliver messages through the Regional Media Relations committee (RMR), direct mailers, and door hangers. Target: Number of placements, interviews, articles, etc., through RMR. Number of impressions, radio paid placements, and PSAs.
		Participate in developing and delivering FOG-related messages to Hispanic audiences	Delivered pollution prevention messages to Hispanic audiences in the 9-county San Francisco Bay Area. In FY 06-07, the project developed a new radio spot on how residents can reduce the amount of FOG entering the sewer system. The paid radio placements reached	Educate residents and people at work about preventing grease blockages through proper handling and disposal through BAPPG Spanish radio ad campaign and other opportunities as they arise. Participate in Spanish radio interview focused on P2

Table 18 FOG Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience <i>Message/Program</i>	Implementation Tactic	2007 Evaluation	2008 Work Plan
			over 200,000 Hispanic listeners daily over a 4-week period, and generated more than 2 million impressions at a cost of about \$7.00 per thousand impressions. Spanish radio station interview did not occur in 2007, but staff is working to schedule an interview for 2008.	messages including FOG, mercury and pesticides in 2008. Target: Number of Bay Area Spanish speakers reached.
		Respond to grease related sewer overflow complaints (DOT).	160 of 189 reported sewer overflows were caused by grease. Development of an SSMP communications plan began in 2007 and is scheduled for completion in 2008.	Ongoing. Staff from ESD, Public Works and the City's Department of Transportation will complete development of a Communications Plan that will describe new outreach pieces needed and track the distribution of these educational materials to residential and other identified audiences.

THIS PAGE INTENTIONALLY LEFT BLANK

Legacy Pesticides

Legacy pesticides of concern – such as DDEs, dieldrin, and chlordane – are no longer used but persist in residual quantities in the environment from historical usage. The Plant's effluent has not been found to contribute to ambient concentrations of these legacy pollutants.

Diazinon is an organophosphate pesticide of concern, and it remains on the federal Clean Water Act 303(d) list. In December 2004, all over-the-counter retail sales of diazinon were phased out. Though recent monitoring data have shown that the Bay is no longer impaired by diazinon, some Bay Area urban creeks are still affected by diazinon toxicity. Several waters in the Bay Area also exhibit pesticide-related toxicity from products containing pyrethroids, which have replaced diazinon in the marketplace. Examples of pyrethroids include bifenthrin, cypermethrin, esfenvalerate, and permethrin. Due to concerns about both diazinon and other pesticide-related toxicity, the Regional Water Board developed and approved a Water Quality Attainment Strategy (WQAS) and TMDL for diazinon and pesticide-related toxicity in 2006.

Pesticide Estimated Loading

All Plant effluent sample results for monitored pesticides were below detection. Hence, it is impossible to reliably estimate loadings at this time.

Pesticide Sources

Pesticides can enter the Plant through indoor use, disposal of unused products via the sanitary system, and from clean up of application equipment. Table 19 lists the sources of pesticides. Most pesticide applications, however, occur outdoors. Therefore, contributions of pesticides to the Bay stem primarily from urban stormwater runoff into the storm sewer system and not from sanitary sewer sources.

Pesticides in urban runoff originate from non-point sources such as outdoor applications of pesticides and herbicides by all sectors – municipal, residential, commercial, and industrial. Because the storm sewer does not provide treatment prior to discharge into the Bay, water quality must be ensured through multi-faceted, non-point source pollution reduction programs.

Most of the City's current pesticide pollution prevention efforts are being implemented under the City of San José Urban Runoff Management Plan (URMP). The URMP FY 06-07 Annual Report and FY 07-08 Work Plan are available online at <http://www.sanJoseca.gov/esd/water-pollution-prevention/urmp.htm>, and the Santa Clara Valley Urban Runoff Pollution Prevention Program Annual Report is available online at <http://www.scvurppp.org/>.

The City, through its URMP, has implemented a Pesticide Management Program. The purpose of the Pesticide Management Program is to reduce the amount of pesticides in stormwater runoff through ongoing activities such as enhancing the City's Integrated Pest Management (IPM) policy and setting municipal policy, properly training staff, ensuring proper techniques when selecting and applying pesticides on City property by both contractors and City staff, providing public education, supporting pesticide drop-off services for residents, and participating in regional efforts to influence regulations that affect pesticide management.

Table 19 Sources of Pesticides			
Municipal	Commercial	Residential	Industrial
Pesticide applications at government/public facilities such as parks, golf courses, right-of-ways, and other municipal facilities and properties	Pesticide distributors/retailers Professional pesticide applications at business parks, schools, and other commercial facilities	Structural pest control Landscape pest control Swimming pool and spa biocides	Pesticide manufacturers Professional pesticide applications at industrial facilities

Pesticides Prevention Plan – 2007 Evaluation and 2008 Work Plan

The City's goals to address Pesticides are:

- Support efforts to implement pesticide reduction strategies as described in the City's Urban Runoff Management Plan (URMP).
- Use regional activities such as Our Water Our World and the Urban Pesticide Committee to advance pollution prevention efforts related to pesticides.

The following table contains a summary of activities the City will continue and new planned activities to accomplish these goals.

Table 20 Pesticide Prevention Plan – 2007 Evaluation and 2008 Work Plan				
Source	Audience Message/Program	Implementation Tactic	2007 Evaluation	2008 Work Plan
COMMERCIAL / INDUSTRIAL				
Pesticides applied by businesses / commercial operations	Business, industrial, commercial, and government operations <i>Use less toxic pest controls</i> <i>Dispose of pesticides properly</i> <i>Information on regulatory framework, BMPs, and IPM resources</i>	Support Regional IPM Alliance Conferences.	The Regional IPM Alliance did not host a conference in 2007.	Continue to support the presentation of an Annual Regional IPM Conference as opportunity arises.
		Support IPM-related workshops and conferences in the Bay Area during years when the Regional IPM Alliance does not host an IPM Conference.	The Regional IPM Alliance is a sponsor of the 2008 Bay-Friendly Landscaping and Gardening Conference. SCVURPPP made preparations to host IPM training scheduled for 2008 for landscape maintenance workers using the Green Gardener Program. SCVURPPP applied for a DPR Pest Management Alliance Grant (not funded) to help	Bay-Friendly Landscaping and Gardening Conference will be held on February 29, 2008. SCVURPPP will implement the first Santa Clara Valley Green Gardener training course from Feb-April 2008. Target: Number of landscapers reached

Table 20 Pesticide Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience Message/Program	Implementation Tactic	2007 Evaluation	2008 Work Plan
			cover cost of the Green Gardener training.	
		An OWOW fact sheet was modified for the business and commercial audience.	Development of an OWOW fact sheet for businesses was postponed by OWOW.	OWOW to re-evaluate development of a fact sheet for businesses in 2008.
RESIDENTIAL				
Home use and disposal	Residents <i>Reduce the use of pesticides</i> <i>Use less toxic pest controls</i> <i>Dispose of pesticides properly</i>	Participate in the Our Water Our World campaign and the Watershed Watch campaign, both of which deliver IPM messages to residents and area businesses.	Continued participation in the Our Water Our World and Watershed Watch campaigns. Attended 6 local outreach events, including Spring in Guadalupe Gardens, the Senior Walk at Valley Fair, and Earth Day at San José State University and distributed IPM messages. Nine stores in San José participate in the IPM store partnership. In FY 06-07 Watershed Watch campaign placed a total of 210 print ads, 1530 radio ads, 75 VTA Bus Tail Posters, and provided donated media on Paramount's Great America electronic billboard.	Ongoing Target: Document that numerous outreach methods are conducted in order to reach a broad audience.
		The Santa Clara County Household Hazardous Waste program information is provided on the City's website to	The City's website continued to offer information about the County HHW program as a means for safe disposal of	Advertise HHW availability for disposal of waste pesticides.

Table 20 Pesticide Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience Message/Program	Implementation Tactic	2007 Evaluation	2008 Work Plan
		advertise means of safe pesticide disposal.	pesticides. The Santa Clara County HHW Program served 3% of the City's households in 2007 and over 4.4% of the households countywide, with no wait and no refusals. In FY 06-07, 1,250 lbs of dursban and diazinon were collected. Over 212,150 lbs of other poisons were managed as well.	Target: % of household reached and adequately served. Target: Amount of pesticides collected.
		Interpretive Sign at Happy Hollow Park and Zoo, installed in FY 03-04, features a photo montage of beneficial uses of creeks and the Bay.	In FY 06-07, 355,859 visitors attended Happy Hollow Park and Zoo, a 12% increase over last fiscal year. The sign is located at the bottom of the entrance walkway into the Zoo. Every visitor to the zoo passes by the sign entering and leaving.	Ongoing
		Maintain ESD Water Awareness web page highlighting several water issues, including pollution prevention, storm drain vs. sanitary sewer, IPM, household hazardous waste, automotive fluids, Anti-Litter Program, etc. Has links to watershedwatch.net and the County's HHW program web sites.	The Water Awareness web page is updated with seasonally pertinent information about a variety of water-related issues. A total of 2,088 visits (up from 1,259 in FY 05-06 and 473 in FY 04-05) were recorded on the City's Water Awareness web page in FY 06-07.	Ongoing
		Print and Radio public service	The "Watch Out" Campaign	Ongoing

Table 20 Pesticide Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience Message/Program	Implementation Tactic	2007 Evaluation	2008 Work Plan
		announcements in community newspapers and South Bay radio stations. Titles: "Watch out for Mercury Pollution" and "Watch out for Pesticides." Current Campaign began July 24, 2006 and includes at least one PSA every week, alternating between formats.	was implemented in the FY 06-07 timeframe. The campaign was very successful in reaching a wide audience with frequency and regularity. Four new partnerships were developed and an estimated 21,544,500 targeted gross impressions were delivered through radio, print and billboard messages.	
		Watershed Watch: Website. The Campaign maintains a website, (with the revised address of www.MyWatershedWatch.org) in both English and Spanish as a resource and means of communicating messages to its general and targeted audiences.	The website received an average of 211.5 page views per day in FY 06-07 – a decrease from the previous year. It is believed the new website address could be a factor. Also the "Watch Out for Mercury Pollution Prevention" advertisements directed people to the County HHW Program website.	Ongoing Evaluate print messages to be more advantageous in directing people to the website.
		Encourage positive media relations in regards to City efforts to reduce pesticide use. Positive media helps to spread the IPM message to residents.	IPM pilot projects implemented in San José in FY 06-07 used biological controls such as goats, bats, and owls to reduce pesticide use. The projects attracted positive radio, television, and print coverage.	Continue to issue press releases and respond to media inquiries as opportunities arise.
		Attend community events and distribute pesticide, HHW, and	Watershed Watch campaign staff attended 3 events: 1)	Ongoing Attend community events as

Table 20 Pesticide Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience Message/Program	Implementation Tactic	2007 Evaluation	2008 Work Plan
		P2 information.	Pumpkins in the Park, 2) South Bay Home and Garden Show, and 3) Happy Hollow Park and Zoo Haunt the Hollow event. Distributed material on a variety of P2. In addition, IPM information was distributed at 6 community meetings in FY 06-07 and all general P2 events listed in Attachment 3.	opportunities arise. Present to 8 SNI community groups.
		Create and provide fact sheets and materials to pesticide retailers to facilitate point-of-purchase outreach to support IPM Store Partnership Program.	There are nine stores in San José participating in the IPM store partnership. This work is done at the SCVURPPP program level.	Ongoing
		Provided IPM and Household Hazardous Waste information at Annual Home and Garden Show.	On April 27-29, 2007, San José provided booth space and staffed booth along with SCVURPPP staff, and co-permittees. Provided IPM and HHW information.	Reassess whether this venue is a worthwhile outreach activity.
Flea Control	Pet Owners	Make the OWOW Fact sheet for Fleas, in both English and Spanish, available at the Animal Services Center.	The Animal Services Center continued to distribute the flea fact sheet in its adoption packets in FY 06-07. The center estimates 300 pet adoptions per month. Placement of Flea fact sheets at the HSSV was delegated to SCVURPPP.	Ongoing

Table 20 Pesticide Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience <i>Message/Program</i>	Implementation Tactic	2007 Evaluation	2008 Work Plan
Municipal				
Pesticides applied on City property	City employees Firms contracting with the City <i>Follow IPM techniques and City policies, SOPs, and BMPs</i> <i>Use less toxic pest controls</i>	Annual training of all City employees; contractors invited to attend training.	124 staff completed training in April 2007. This was a mandatory training, 100% of applicable employees attended.	Hold annual training for all City employees that apply pesticides. Target: 100% of applicable employees receive training.
		Contracts require compliance with IPM techniques and City Policies.	All new contracts contained standard IPM content.	Ongoing Target: 100% of new contracts include IPM language.
		Pesticide use tracking database implemented.	The City tracks applications of pesticides in database. In FY 06-07, the City improved its data tracking by incorporating data from Special Districts contractors, Municipal Water Resources locations, and pesticides distributed to City staff by the Central Warehouse. The City continues to use its existing database to track pesticide usage. Pursuit of a new database has been postponed.	Improve pesticide use tracking on municipally owned property.
		Notification of no pesticide use by untrained staff policy	All City staff received notice or directions from facility managers.	Ongoing
		Article distributed to ESD employees in ESD Connections	An article on IPM pilot projects in the August 2007 <i>Inside San</i>	Educate employees who are not authorized/trained to apply

Table 20 Pesticide Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience <i>Message/Program</i>	Implementation Tactic	2007 Evaluation	2008 Work Plan
		department newsletter on IPM encouraged the use of less toxic pest and weed controls at home	<i>José</i> newsletter encouraged the use of less toxic pest and weed controls at home. <i>Inside San José</i> is available to all City employees and residents via print and the City's website.	pesticides not to use over-the-counter pesticides at work or at home.

THIS PAGE WAS INTENTIONALLY LEFT BLANK

In recent years, it has become possible to detect very small amounts of trace organic substances, such as pharmaceuticals and other chemicals found in personal care products, cleaning products and medications, which may have the potential to impact human health, aquatic life, and wildlife at extremely low concentrations in our nation's waterways. New nationwide studies are published regularly showing that these compounds have been found in receiving waters, as well as various points in the wastewater and reclaimed water treatment trains.

In 2007, the City engaged in several activities to increase public awareness regarding the impact of emerging contaminants on the Bay. Information on antibacterial products, especially those containing triclosan, and the proper disposal of pharmaceuticals was disseminated to the public and City employees at several community events and presentations. The City continued collaborating with regional partners on a study to better understand the impact of pharmaceuticals on the Bay and will continue participating in this and WMI Emerging Contaminants Work Group efforts in 2008. Also, in September 2007, the City Council adopted a Green Fleet Policy to address how the City manages its diverse fleet of both vehicles and heavy equipment to reduce carbon dioxide emissions resulting from City operations.

Safe Medicine Disposal

As a result of the 2006 Safe Medicine Disposal Days, the City learned that large pharmaceutical collection events are costly and resource intensive. In September 2007, the City offered pharmaceutical collection as part of a Pollution Prevention Week Employee Resource Fair. While the City intends to continue offering small scale pharmaceutical collection events, the focus has shifted from one-day collection events to establishing a more convenient and sustainable alternative. City staff has attended meetings where plans for a regional pilot program have been discussed. It is anticipated that a regional pilot program will begin in 2008. Until an ongoing program has been implemented, residents will continue to be directed to the Santa Clara County Household Hazardous Waste (www.hhw.org) program for disposal of unwanted pharmaceuticals.



The City submitted a grant application to the U.S. Environmental Protection Agency's Community Action for a Renewed Environment (CARE) program to establish a pharmaceutical collection pilot program for outdated or unwanted medications. CARE is a program designed to help communities create collaborative partnerships to address toxics in their local environment. The \$300,000 grant would have enabled the City to implement a pilot pharmaceutical

collection program in partnership with local hospitals, senior centers and other organizations. The City did not receive a grant award, but will continue exploring future grant opportunities to provide drop-off locations through partnerships with local businesses, clinics, law enforcement, and fire departments.

The City also participates on the California Product Stewardship Council in promoting possible producer responsibility legislation for pharmaceuticals at the state level. The City supported Senate Bill 966 (Simitian) that was signed into legislation by Governor Schwarzenegger in October 2007. This legislation will begin the process of establishing a state-wide solution for the improper disposal of unused and expired prescription pharmaceuticals by creating model disposal programs that allow retailers of pharmaceutical drugs and other organizations to have in place a system for the acceptance and collection. The California Integrated Waste Management Board will implement grant funding for these model programs. The City will monitor for grant funding and program implementation opportunities.

Evaluation of Pharmaceuticals in the San Francisco Bay

The City of San José, the City of Palo Alto, the San Francisco Estuary Institute and Axy's Analytical Laboratories are conducting a collaborative study of pharmaceuticals in the San Francisco Bay water column. Since the Regional Monitoring Program (RMP) does not currently monitor for pharmaceuticals in the Bay, it is unknown which pharmaceuticals are present and at what concentration levels.

The objective of this study is to evaluate these unknowns. Forty pharmaceuticals and triclosan will be analyzed. Several key questions will be addressed, such as: What pharmaceuticals and drug metabolites are present in the Bay? Are they present at concentrations that could potentially cause toxicity or endocrine system disruption to critical aquatic species? What are the major sources and loadings from those sources? Are some areas higher in concentrations than others?

This project began in summer 2006 and was expected to be completed within one year from start date. The RMP Technical Report and paper to be submitted for potential publication in a peer reviewed scientific journal were temporarily put on hold and are now scheduled to be finalized in early 2008.

A targeted Phase II of the project is being discussed. This phase would select specific chemicals to be analyzed rather than a global sweep of over forty pharmaceuticals.

Watershed Management Initiative

City staff participates in most of the workgroups of the WMI, and provides fundamental support by staffing the WMI Project Coordinator position and one of the Vice-Chair positions. City staff also serves as Chairs for the Land Use Subgroup, the POTW Subgroup, and the WE&O. In 2008, City staff will continue to fill these roles.

The Emerging Contaminants Subgroup established a prioritization process and determined that the next white paper will focus on alkylphenol ethoxylates. Alkylphenol ethoxylates are surfactants widely used in cleaning products, most notably in laundry detergents. There is a growing concern about the emergence of these chemicals in the environment since they are an endocrine disrupting compound. The Emerging Contaminants Workgroup will craft a white paper that reviews the state of knowledge regarding alkylphenol ethoxylates and will recommend strategies to minimize their occurrence and degradation in surface water. The group will join with the San Francisco Estuary Project Emerging Contaminants Workgroup on this project.

The newly established Product Stewardship WMI Subgroup will advance pollution prevention initiatives by encouraging participation in the California Product Stewardship Council, pilot a pharmaceutical collection program, and coordinate on product/procurement actions.

Green Fleet Policy

In September 2007, the City Council adopted a Green Fleet Policy to address how the City manages its diverse fleet of both vehicles and heavy equipment. Objectives of the policy include:

- 1) Optimization of the fleet size;
- 2) Purchase of non-emergency fleet vehicles that provide the best available net reduction in vehicle fleet emission, including the purchase of alternative fueled and hybrid vehicles;
- 3) Make reduced CO₂ emissions a critical purchase criterion;
- 4) When emission reduction targets are not being met, consider purchasing carbon offsets;
- 5) Reduce emissions of carbon monoxide (CO), nitrogen oxides (NO_x) and particulate matter that endanger public health; and,
- 6) Implement concurrent programs using advanced emission controls on all City owned or operated vehicles.

The City has a goal of reducing vehicle emissions by 25% by the year 2013 as part of its overall municipal operations greenhouse gas reduction goals. In addition to greenhouse gas reduction, the result of this policy also addresses dioxin impairment in San Francisco Bay.

Citywide Implementation of Biodiesel

The City successfully implemented using a 5% biodiesel blend (B5) last year in its 673 piece diesel fleet. The use of B5 enabled the City to achieve significant reductions in greenhouse gas emissions, including an estimated 4% reduction in carbon dioxide (CO₂) emissions, as well as reductions in carbon monoxide, hydrocarbons, and other priority air pollutants.

In Fall 2007, the City began using a mixture of 10% biodiesel (B10) and 90% ultra low sulphur diesel (ULSD). Through the use of B10, the City hopes to double the percentage reduction in CO₂ emissions, preventing approximately half a million

pounds of carbon dioxide from entering the atmosphere. The City is purchasing a fuel-grade biodiesel blend made from 100% virgin soybean oil and produced to strict industry specifications in order to insure proper performance. The City plans to transition to B20 in May 2008.

This effort makes the City of San Jose's diesel inventory fleet one of the largest in the country running on B10 and reflects the City's commitment to the Green Vision, the U.S. Mayors Climate Change Agreement, the Urban Environmental Accords and the City of San José's aggressive greenhouse gas (GHG) reduction goals for its municipal operations which call for a 35% reduction in GHG emissions by 2020.

Presentations on Emerging Contaminants

In 2007, staff presented information on emerging contaminants at the Martin Luther King Jr. library, the Go Green Schools Conference, Santa Clara County's Green Business Conference, San José State University's Expanding Your Horizon's Conference, and at local nonprofit organizations. Over 300 people attended these presentations.

The presentations provide an overview of the latest scientific evidence about environmental impacts of personal care products, cleaning products, and pharmaceuticals once they enter water bodies such as San Francisco Bay and the status of regulations associated with emerging contaminants. Staff introduces attendees to what steps are being taken worldwide to address emerging contaminants, alternative products available in the market place, and what to look for when choosing products to reduce risks and our ecological footprint.

Staff presented at WEFTEC 2007 in San Diego on *Utilizing Environmental Preferable Purchasing to Address the Environmental Emergence of Triclosan*. The presentation was based on the research and white paper the City participated in through WMI on triclosan. The presentation described how the Environmental Services Department, working through the City's Environmental Preferable Purchasing Policy, phased out antibacterial hand soaps and replaced them with regular hand soaps throughout the Wastewater Treatment Plant facility. Employees were also furnished with alcohol based hand sanitizers for use after they have washed their hands. This program will be used as a model for eliminating triclosan at all City facilities.

Coming Clean Initiative

In 2007, the City began to work with the Santa Clara County Medical Association (SCCMA) Environmental Health Committee on a collaborative called "Coming Clean Campaign for Health". The SCCMA initiated this effort to establish a partnership with local government agencies, non profit organizations, and others to educate the public about important environmental health issues. The collaborative is still in it's infancy stage, but has already identified as its first project development of a triclosan fact-sheet to encourage the public to use plain soap and water rather than triclosan containing antibacterial soaps.

Other Pollutants and Emerging Pollutants Prevention Plan – 2007 Evaluation and 2008 Work Plan

The City's goals to address Emerging Pollutants are:

- Increase City's knowledge of impact of emerging contaminants on Plant's effluent and San Francisco Bay
- Implement pilot programs to identify cost effective methods for handling some emerging pollutants
- Raise resident awareness about concerns related to emerging pollutants

The following table contains a summary of activities the City will continue and new planned activities to accomplish these goals.

Table 21 Other Pollutants & Emerging Pollutants Prevention Plan – 2007 Evaluation and 2008 Work Plan				
Source	Audience Message/Program	Implementation Tactic	2007 Evaluation	2008 Work Plan
COMMERCIAL / INDUSTRIAL				
Commercial cleaning products	Facility maintenance companies <i>P2 Methods</i> <i>Alternative cleaning products</i>	Distribute "Light Industrial Housekeeping" booklets during Stormwater inspections, at training events, and in permanent display at City Hall.	City staff presented on the subject of Green Janitorial Products at the Santa Clara County Green Business workshop held in March 2007. Approximately, 25 copies of the "Light Industrial Housekeeping" booklets were distributed at the workshop.	Distribute booklet at Conference and other events as appropriate.
Expired Pharmaceuticals	Hospital pharmacy employees Medical waste handlers Medical waste decision makers <i>Pharmaceutical management</i> <i>P2 Methods</i> <i>Proper disposal of</i>	Promote BAPPG seminar on pharmaceuticals management and disposal for hospital staff.	BAPPG did not hold a seminar for hospitals in FY 06-07. City prepared and submitted a CARE grant proposal for funding a pharmaceutical take back pilot program at local hospitals. The City's proposal was not selected for a grant	Continue exploring grant opportunities to fund a pilot program. Partner with other municipalities and agencies in the county and/or region to implement a pharmaceutical take back pilot in 2008.

Table 21 Other Pollutants & Emerging Pollutants Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience Message/Program	Implementation Tactic	2007 Evaluation	2008 Work Plan
	pharmaceuticals		award.	
RESIDENTIAL				
Expired medications Other pharmaceuticals	Residents <i>Do not flush unwanted medicine down the toilet or sink or put in trash</i> <i>Bring in unwanted medicine for proper disposal</i>	Sponsor the collection of expired medications and other pharmaceuticals.	The City held a medicine take back as part of a Pollution Prevention Week Employee Resource Fair held on September 18, 2007. 59 pounds of expired and unused medicines were collected and disposed.	Partner with municipalities and agencies to implement a pilot medicine take back program in 2008. Target: track pounds of medications collected through pilot program.
		Support Santa Clara County HHW program.	City representatives attended standing regional HHW coordination meetings and the North American Hazardous Materials Management Association Annual Conference in 2007. Staff continues to provide ongoing residential outreach to promote the HHW program benefits and to provide updates on the planning and construction of the new drop-off facility in San José.	2008 outreach will focus on the HHW site development status and promotion of the new facility. Educate residents on new waste streams such as medical sharps that will be banned from landfills in 2008.
Antibacterials, Triclosan and personal care products			Presented at San José State University, local nonprofit organizations, the MLK Library, the Go Green Schools conference, and County of Santa Clara's Green Business	Ongoing Continue working with the with Coming Clean Initiative partners to develop a Triclosan fact sheet.

Table 21 Other Pollutants & Emerging Pollutants Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience <i>Message/Program</i>	Implementation Tactic	2007 Evaluation	2008 Work Plan
			Conference on the potential risks of emerging contaminants in personal care products, cleaning products and pharmaceuticals once they enter water bodies like the Bay. More than 300 participants attended the presentations.	Target: Increased awareness of presentation participants. Number of attendees
GOVERNMENT AGENCIES				
Soaps and related products	Decision makers <i>Triclosan is the most common chemical in antibacterial soaps and related products</i> <i>Scientific evidence suggests antibacterial products are no more effective than plain soap.</i>	Through WMI develop a white paper to encourage discussion among policy setters, decision makers, and implementers about Triclosan.	The white paper, <i>Environmental Emergence of Triclosan</i> , was co-developed through the WMI's Emerging Contaminants Workgroup, in cooperation with City of Palo Alto, the San Francisco Estuary Institute and Axys Analytical Laboratories. This paper was disseminated nationwide. The completed RMP Technical Report on pharmaceuticals in the SF Bay and the publication of a paper in peer reviewed scientific journal has been postponed.	The RMP Technical Report and paper for submittal for peer review publication scheduled for completion in early 2008. Monitor through WMI when Phase II of project is scheduled to begin.
Expired pharmaceuticals, and other emerging pollutants	Decision makers <i>Producer Responsibility</i>	A City representative participates in the California Product Stewardship Council (CPSC). A coalition of local governments and associations across California, this group	City staff actively contributes to this organization through participation in the Local Government sub-committee. CPSC was a guiding force in the California Integrated Waste	Ongoing Continue to monitor progress toward legislation.

Table 21 Other Pollutants & Emerging Pollutants Prevention Plan – 2007 Evaluation and 2008 Work Plan

Source	Audience <i>Message/Program</i>	Implementation Tactic	2007 Evaluation	2008 Work Plan
		actively promotes producer responsibility legislation	Management Board adopting a producer responsibility framework policy in 2007. However, EPR legislative action is not anticipated in the next year.	

In addition to implementing activities for specific pollutants of concern, the City participates in various strategies, activities and venues to educate and encourage general pollution prevention behavior.

Pollution Prevention Week



San José participated with jurisdictions across the nation in recognizing National Pollution Prevention (P2) Week 2007, September 17 – September 23. Staff developed a P2 Week itinerary with several events and communications activities that highlighted the City's year-round pollution prevention efforts and encouraged City employees and visitors to adopt

simple pollution prevention practices.

City Hall Display

Several posters were on exhibit in the City Hall lobby throughout P2 week featuring pollution prevention programs that the City has implemented and offering specific pollution prevention tips for a: Earth Friendly Garden; Less Toxic Home; Litter Free Healthy Creeks; and Safe Disposal of Household Hazardous Waste (HHW).

Pollution Prevention Resource Faire

Over 200 people attended a resource faire held on Tuesday, September 18, in the City Hall Rotunda. Representatives from over 16 City and County environmental programs and initiatives were on hand to provide attendees with information and tools to prevent pollution in their daily lives. Pollution prevention kits containing a spray bottle imprinted with formulas for non-toxic cleaning solutions, a low flow shower head, a low flow aerator, a junk mail kit, a Grow-it Guide, and a reference guide for fish consumption were distributed to attendees. Additionally, attendees were able to exchange mercury fever thermometers for digital thermometers, drop off old cell phones for recycling, and bring in old medications for safe disposal.

Guadalupe River Walk

On Wednesday, September 19, several employees joined a City biologist and creek expert on a walk along the Guadalupe River to learn about the affects of urban activities upon the riparian corridor. Attendees got a first hand look at the three-mile ribbon of park land that runs along the banks of the Guadalupe River in the heart of downtown. They learned about the fish species, birds and other wildlife that are able to tolerate this urban habitat and how everyday human activities affect them.

The Climate Project Global Warming Presentation

On Thursday, September 20, Dr. Andrew Gunther, Executive Director of the Center for Ecosystem Management and Restoration and member of The Climate Project, gave a presentation on the effects of global warming based on the Academy Award-winning film, "An Inconvenient Truth." The lunch hour presentation held in the Council Chambers drew over 100 employees to learn about the science of global warming and what they can do now to prevent this problem from getting worse.



Pollution Prevention Week Proclamation and Commendations

The City Council adopted a proclamation at its September 18, 2007, meeting declaring Pollution Prevention Week in San José.

The City Council also presented commendations to Fleet Management of General Services for converting more than 34% of the City's entire fleet to "green" fuel, utilizing alternative fuels and emissions reduction technology, and implementing the use of biodiesel fuel for all diesel vehicles and equipment in the City to reduce carbon dioxide emissions by 5%; and, to the Purchasing Division of Finance for implementation of the Environmentally Preferable Purchasing Policy (EP3) by including environmental considerations through generic wording in all bids and RFPs and EP3 criteria in specifications whenever possible.

Youth Education

The City's Youth Watershed Education Team (YWET) develops and delivers watershed and P2 messages to youth and youth educators through grants, curricula aligned to state standards, teacher workshops, and partnership activities with other agencies, organizations, and institutions. In 2007, the Watershed Awareness program brochure, *Creeks Come to Class*, was updated and will be printed and distributed to teachers in 2008. Water Awareness presentations were conducted for 18 classrooms, teaching students about the watershed and pollution prevention. The City hosted two environmental and educational trainings for educators on November 3, 2007 to train teachers how to successfully write grants for youth watershed education projects.

Go Green Initiative

In November 2007, San José co-hosted the Go Green Initiative's third annual Earth Summit, and was named the first "International Go Green City of the Year" at the event. Approximately 300 educators from across the nation came and learned methods of incorporating green concepts into the classroom. 95 of the participants included San José parents, teachers, students and principals. The Go Green Initiative is the nation's fastest growing fully comprehensive environmental action plan for schools.

The San José Go Green Schools Program fosters environmental stewardship in a parent- and community-driven process based on the Go Green Initiative. San

José staff connects K-12 public and private schools with green resources and encourages them to Go Green: from starting a school recycling or composting program, launching environmental education, buying green or evaluating school environmental practices that impact student health. In 2007, the program worked with over 70 schools, helping them establish green practices and receive funding for mini-grant projects.

Grants

The City funded a grant to the Don Edwards National Wildlife Society for implementing several events and projects delivering messages on pollution prevention methods, watershed protection, water conservation, water recycling, and wastewater treatment. Events in 2007 included Shark Day, Migratory Bird Day, and the annual summer camp. These messages area also incorporated in teacher training modules at the Wildlife Refuge, school field trips, and in-classroom presentations. Weekend Interpretive Programs are also offered to the general public at the Refuge.

In 2007, the Youth Watershed Education Grants (YWEG) Program approved 10 grant awards totaling over \$37,515. Over 2,650 students In K-12 will be served by these grants and 25 teachers will be trained (in one training session) over the course of next year. Half of the grants went to educators or non-profits who had not received YWEG funding in the past. These grants assist educators in developing and delivering P2 and watershed activities, often to underserved youth.

The following table details these and other activities with which the City has been involved.

Table 22 General Pollution Prevention Outreach for 2007

Topic/POC	Activity	2007 Activity Description / Status	Evaluation
P2	Slow the Flow	Grant to Don Edwards Alviso Environmental Education Center to host 9 different types of events: special events, interpretive programs, teacher orientation, field trips, in-class presentations, outreach presentations, workshops, special visits and interpretive displays.	<p>This program reached an estimated 16,000 students and adults in the Plant's Tributary area in 06-07. This was accomplished through field trips, weekend programs, special events, outreach events, and classroom presentations. Additionally, visitors can view the interpretive displays at the Environmental Education Center.</p> <p>From a presentation standpoint, the program continues to get very high evaluations from both teachers and students. Almost 40% of those attending are repeat audiences. From a content standpoint between 91 and 100% of those questioned in exit exams recalled key messages of the presentations.</p>
P2	Water Wizards Festival	<p>May 25, 2007. Water education festival for 3rd graders. The purpose of the festival was to increase the awareness of the importance of water and promote stewardship of water as a resource. ESD taught 3 activities related to the City's mission concerning water and watershed issues. The messages taught were:</p> <ul style="list-style-type: none"> • Pollution prevention • Difference between storm and sanitary sewer systems • Value of recycled water • Value of the treatment plant • Importance of soil and the value of composting 	<p>300 students from 4 San José public schools participated. Pre- and post-testing of each student showed knowledge increases in all areas:</p> <p>Down 1% in knowing that the water we use at home affects our rivers.</p> <p>Up 2% in knowing Polluted water is not good to drink.</p> <p>Up 2% in knowing all living things need water.</p> <p>Up 21% in knowing that we live in a watershed.</p>
P2	Pumpkins in the Park	October 13, 2007. Booth at event with Pesticide, HHW, and P2 information and bean-bag game for the kids. Donated 2 ZunZun presentations for the day's stage events.	Attendance in the booth increased over previous fiscal years. Attendees were very interested in HHW information.

Table 22 General Pollution Prevention Outreach for 2007

Topic/POC	Activity	2007 Activity Description / Status	Evaluation
P2	Water Awareness web page	ESD web page highlighting several water issues, including pollution prevention, storm drain vs. sanitary sewer, IPM, household hazardous waste, automotive fluids, Anti-Litter Program, etc. Links to watershedwatch.net and the County's Household Hazardous Waste program included.	The Water Awareness web page is updated with seasonally pertinent information about a variety of water-related issues. A total of 2,088 visits (up from 1,259 in FY 05-06 and 473 in FY 04-05) were recorded on the City's Water Awareness web page in FY 06-07.
Various	Preventing Storm Drain Pollution	Booklet of stormwater pollution prevention information for commercial and light industrial facilities. Includes proper storage, clean-up, and pollution prevention best management practices. Booklet available in English, Spanish, and Vietnamese.	Watershed Enforcement inspectors typically give this brochure to every facility they inspect, as it is a concise and comprehensive source of information. In FY 06/07, Inspectors distributed 882 English, 228 Spanish, and 139 Vietnamese booklets. In addition, 3,494 of the English version were downloaded from the City's website.
Household chemicals including pesticides, fertilizers, cleaning products	City of San José Youth Watershed Education Team	P2 methods, watershed protection, water conservation, personal responsibility. Develop and deliver watershed and P2 messages to youth and youth educators through grants, curricula aligned to state standards, teacher workshops, and partnership activities with other agencies, organizations, and institutions. Foster school recycling and environmental stewardship in a parent and community driven process.	Updated program brochure; will track number of brochures distributed in 2008. Conducted 18 <i>Water Awareness</i> presentations in classrooms. Delivered two environmental and educational trainings on November 3, 2007: Successful Grants for Youth Watershed Education and Connecting Children to Nature. YWET team members attended the Go Green Conference on November 2, 2007; approximately 300 attendees. Provided resources for educators, parents, and students (e.g., posters, teacher packets, and training announcements).
Household chemicals including pesticides, fertilizers, cleaning products	Youth Watershed Education Grants (YWEG)	P2 methods, watershed protection, water conservation, personal responsibility. The City uses the YWEG grant program to develop and deliver watershed and P2 messages to youth. The grants are for educators to develop and deliver P2 and watershed programs and lessons.	The City funded 11 new grant projects totaling \$39,330 affecting over 2,140 students in grades 1-12.

Table 22 General Pollution Prevention Outreach for 2007

Topic/POC	Activity	2007 Activity Description / Status	Evaluation
Water conservation, use of recycled water in cooling tower applications, Green Building	Special Event	Water Reuse Association Cooling Tower Workshop	On June 15, 2007, the City hosted the Water Reuse Association Cooling Tower Workshop. More than 100 business and agency decision-makers attended, representing the potential to conserve more than 2 billion gallons of drinking water annually through the use of recycled water in industrial applications. The event generated several inquiries from the San José service area and San José staff is following up on these.
Pesticide Pollution Prevention integrated Pest Management, Water conservation, Santa Clara Basin Watershed Management Initiative, Green Building	Special Event	Santa Clara Creeks Coalition Conference	City representatives and Santa Clara County watershed stakeholders participated in the Santa Clara Creeks Coalition Conference on November 17, 2007. Presentations included monitoring and restoration techniques as well as updates on current activities.
Water Conservation, Santa Clara Basin Watershed Management Initiative, Green Building.	Special Event	Acterra Green Business Awards	On June 7, 2007, the City attended the 15 th Annual Business Environmental Awards. An estimated 150 leaders from the environmental, business and regulatory communities attended. Both the quality of contacts and opportunities for collaboration were high.
Various	Events	Participate with partners to attend various events and distribute information through fact sheets and displays on watershed protection, wastewater paths, programs for businesses and City programs to prevent pollution along with general P2 tips.	In FY 06-07 participated in the following events; Council Districts 1, 2, 8 special events, Fiesta Patrias Parade & Festival, Almaden Art and Wine Festival, Earth Day at Children's Discovery Museum, Senior Walk at Valley Fair Mall, Spring in Guadalupe Gardens, Earth Day at Cisco, Home and Garden Show.
Various	Event	San José Grand Prix	The City of San José ran anti-litter commercials on the closed-circuit monitors and had track signs promoting conserving natural habitat. There was an outdoor booth providing pollution prevention information, and a booth at the City sponsored

Table 22 General Pollution Prevention Outreach for 2007

Topic/POC	Activity	2007 Activity Description / Status	Evaluation
			hospitality suite. This was a 3-day event.
Various	Facilitate implementation of environmental programs in schools	The San José Go Green Schools Program connects K-12 public and private schools with green resources and encourages them to initiate environmental practices.	In 2007, the program worked with over 70 schools, helping them establish green practices and receive funding for mini-grant projects. In November 2007, San José co-hosted the Go Green Initiative's third annual Earth Summit, and was named the first "International Go Green City of the Year" at the event. Approximately 300 educators from across the nation came and learned methods of incorporating green concepts into the classroom.
Municipal Employee General P2 Training			
P2	Pollution Prevention Week	Participated in National Pollution Prevention Week 2007, September 17 - September 23. Staff coordinated a P2 Week itinerary with several events and communications activities that highlighted the City's year-round pollution prevention efforts and encouraged City employees and visitors to adopt simple pollution prevention practices. Activities included: City Hall display, P2 resource faire, Guadalupe River walk, global warming presentation, and City Council proclamation and commendations.	Over 200 people attended the Resource Faire held in the City Hall Rotunda with over 16 City and County environmental programs and initiatives participating. Over 100 employees attended a presentation on the effects of global warming given by Dr. Andrew Gunther based on the Academy Award-winning film, "An Inconvenient Truth". The City Council adopted Pollution Prevention Week and gave commendations to Fleet Management for utilizing alternative fuels and emissions reduction technology and to the Purchasing Division for implementation of the Environmentally Preferable Purchasing Policy.
Varies	Brown Bag Presentations	Brown Bag training sessions on "Green" issues for ESD employees implemented as a component of ESD's Green Business certification. "Green" practices at home and work	Six "Brown Bag" presentations were held in 2007, with a total of approximately 167 attendees. Topics focused on what employees can do to prevent pollution at work and at home.
Wastewater and stormwater compliance reminders and P2 behavior messages	Voluntary training on wastewater and stormwater	Training given on "Watershed protection - it's everybody's business", "Are effective BMPs being used?", "Stop watershed pollution", "No wash water in storm drain.",	City wastewater and stormwater staff provided training to approximately 607 City employees including Public Works and Building Department inspectors, Department of Transportation street

Table 22 General Pollution Prevention Outreach for 2007

Topic/POC	Activity	2007 Activity Description / Status	Evaluation
	compliance	"Report dumping" (with phone #), "Only rain down the storm drain", "No mud on street", "Report all spills", "Dilution is prohibited", "Keep sample point clean", "Remember SMR date", and the City's web site address	crews, and parks maintenance crews. Ink pens are distributed at the trainings with a compliance message on the barrel, and six more messages in a rotating display.

Attachments can be found at: www.sanjoseca.gov/esd/cbs.htm

Attachment 1 - South Bay Monitoring Program 2007 Progress Report

Attachment 2 - Hg Fate and Transport Study – Executive Summary

Attachment 3 - Outreach Material

- CA Wastewater Testing Laboratories List
- Curbside Courier Newsletters, Spring and Fall, 2007
- ESD Connections Newsletter - Spring, Summer, Fall, Winter, 2007
- Get Mercury Wise and Protect the Bay Brochure
- Grease Interceptor and Grease Trap Cleaning Services and Log
- “Green” Brown Bag Flyers - January, February, March, April, and August, 2007
- Guidelines for Efficient Water Use
- Industrial User Academy Workshop, April 2007
- Inside San José, August 2007 Newsletter
- Mobile Food Vendors Environmental Guide lines brochure
- National Pollution Prevention Week Flyers and Display
- Recycle@Work Poster
- Silicon Valley Energy Watch
- Thermometer Exchange Event Flyers
- Tributary Tribune Industrial Newsletter, Issues I, II, III, 2007
- Watch Out For Mercury Pollution! Poster
- Watershed Awareness - Creeks Come to Class Brochure

Attachment 4 - Plant Influent and Effluent Charts

- Copper influent
- Copper effluent
- Nickel influent
- Nickel effluent
- Mercury influent
- Mercury effluent

Attachment 5 – TMDL, RMP, and SSO Participation Letters

- January 3, 2008 BACWA Letter, RE: Submittal of Annual Reports by BACWA Members on Participation on the RMP, TMDLs, and SSOs
- January 3, 2008 San Francisco Estuary Institute, Participation in the RMP